

A USEFUL LOOK AHEAD FROM WASHINGTON

JANUARY 1970

Nation's Business

GREAT
MOMENTS
AND GREAT MEN
IN AMERICAN
BUSINESS

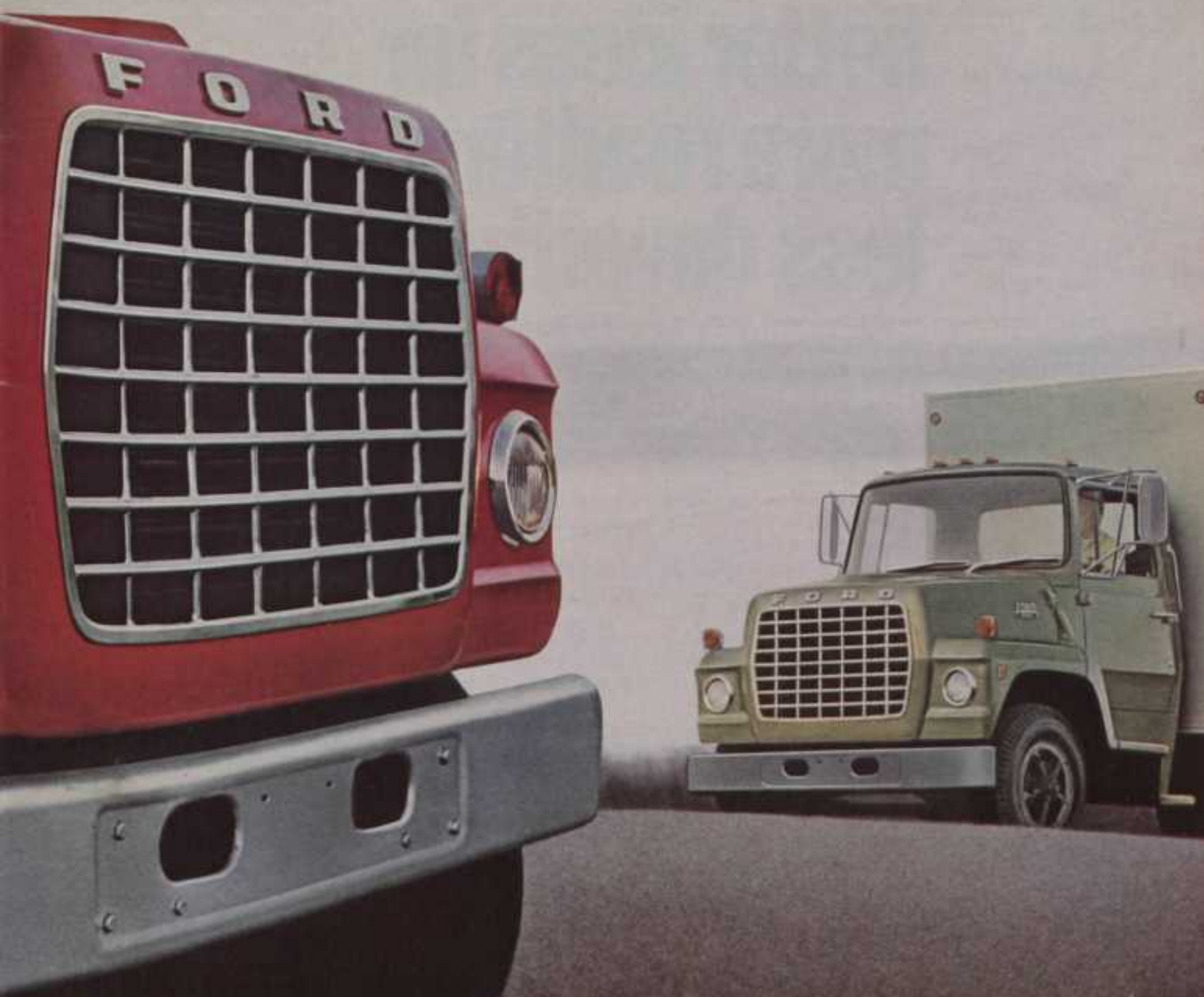
What Congress is doing about crime
Green light for a business speedup



Introducing Ford's new

LOUISVILLE **LINE**

...over 650 models strong



The big ones with the better ideas

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TURN

Ford's new **LOUISVILLE LINE**

Loaded with better ideas for more roadtime, less downtime.

Most comprehensive advance ever made in any truck line! Over 650 new models; medium-duty through extra-heavy; four configurations! Important design innovations! All-new truck assembly plant; superior quality control procedures!

Never before has any big-truck maker made as extensive a product change as Ford, with so many better ideas in over 650 new models.

Never before has any truck maker applied such a concentration of better ideas to reduce truck downtime, increase truck roadtime.

A once-in-a-lifetime multimillion-dollar investment in plant, engineering and tooling has made these benefits possible.

Ford is the first truck maker to create a line of trucks by starting with a new assembly plant. Thus Ford's LOUISVILLE LINE is "new from the ground up" in a very literal sense.

Our new assembly plant near Louisville was built for the exclusive manufacture of medium-, heavy-, and extra-heavy-duty trucks. Obviously, a new plant enabled us to introduce new production and quality-control procedures for new standards of reliability.

Paralleling the innovations in plant and procedure are innovations in product design never before available in big trucks. These better ideas concentrate on the goal of reducing downtime and increasing roadtime. But they also cover many other factors that contribute to greater operating efficiency and lower cost of ownership.

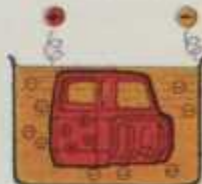
The highlights of the LOUISVILLE LINE'S better ideas are arranged under four main subject headings in the paragraphs that follow.

See if you don't agree that our new Fords are "The big ones with better ideas."

1. RELIABILITY

These are the better ideas that increase roadtime by providing LOUISVILLE LINE trucks with the sound design, premium materials and protective armor that help keep trucks on the job.

Deep-dip Electrocoat Prime Paint Process—covers every inch of sheetmetal with corrosion-barrier primer. Electric charge pulls primer right into the tiniest crevices and provides superior bonding in welded areas and corners. In addition, cab underbody components most subject to corrosion are zinc-coated.



Cross-flow radiator saves fan horsepower, extends belt life. Cross-flow design allows increased core area, slower fan speeds. With a typical Diesel engine at highway speed, for example, horsepower consumed by the fan drops as much as 48%.

Neoprene adds extra protection to Hypalon electrical insulation. Wiring harnesses are wrapped with tough Neoprene®, or an extruded-vinyl jacket. Super-durable Hypalon® insulation used throughout.

Nylon air brake lines with greater abrasion resistance—more pliable and abrasion resistant than either copper or wire-braid-reinforced lines.

Premium-steel frames now up to 14 1/4" deep. Single-channel design offers strength equal to or greater than multiple-channel frames, reduces weight up to 340 lbs. Steel up to 110,000 psi. Premium bolted frames available.

First truck-type power steering pump—specifically designed for heavy-truck applications. Operates at low speed for reduced wear and longer belt life.

Dual brake systems—hydraulic or air. Hydraulic brakes have two essentially independent systems. Dual system air brakes have faster air transmission times for quicker response and shorter stopping distances.

Underhood air cleaner traps 99.9% of dirt—cuts service frequency. 2-stage Cyclopac® air cleaner centrifuges out most dirt and water in first stage. Dry air cleaner element traps more fine dirt in second stage than any oil-bath air cleaner.



2. FAST MAINTENANCE

These are the better ideas that increase roadtime by getting Ford Trucks on the job faster whenever they come off the road for scheduled maintenance.

Full-tilt fiberglass hood. Steel-reinforced fiberglass hood and fender assembly is about 40% lighter than a comparable steel assembly. Easily tilted. Ford short-conventional mediums are the only trucks in their class to offer a full-tilt hood.

"Feet-on-the-ground" engine servicing.

Complete top and side engine accessibility. Mechanics can stand close to the engine for all operations. "Right side quick check" design puts all components relating to safety-lane check on right side of engine.



Faster tracing, color-coded air tubing. Different colors for each air line system — primary, secondary, parking, auxiliary.

Tilt-out instrument panel. Right section of the linehaul instrument panel is hinged for easy servicing of gauges and gauge lights.

Check-at-a-glance radiator sight gauge. New coolant sight gauge allows checking of fluid level without removing radiator cap. Standard on Series 800 and up.

Air-Pac control serviceable as a unit.

Hand-operated air controls are clustered in one removable panel section and are connected to an air manifold on the firewall. Entire assembly easily removed for service.



Fast access fuse panel. On linehaul models the fuse panel is located behind a padded door to the right of the instrument console for quick visual inspection, fast access. The 9000 Series is equipped with automatic reset circuit breakers as standard equipment. Optional on others equipped with linehaul panel.

Four easy-to-reach electrical junction blocks. Junction blocks on firewall, on underside of hood, on rear cab panel and at rear of frame are easily accessible for circuit testing. Stud and eyelet connections are virtually vibration-proof.

3. DRIVER BENEFITS

These are the better ideas that contribute to overall operating efficiency, including increased roadtime. Better facilities and environment for the driver lead to better driving and a more efficient use of roadtime. Greater comfort improves morale and encourages better care of equipment.

Shortest turning diameter for easy maneuverability. The wide track of Ford front axles lets wheels turn as sharp as 40° on axles rated up to 12,000 lbs., 37° on axles rated from 16,000 lbs. to 20,000 lbs. Ford's heavy-duty short-conventional models have shorter turning diameters than those of all major competitors.

More comfortable space for the driver. In such significant dimensions as seat height, legroom, shoulder room and in floor-to-roof height (seat height plus headroom) Ford excels all other cabs.

Adjustable steering column maintains 20° angle. Rolls



4 1/2 inches fore and aft on Lexan® balls. This adjustment

taken together with vertical and horizontal seat adjustments gives a comfortable driving position for any combination of driver height, girth, arm or leg length. Steering wheel remains at a constant angle 20° from horizontal—the optimum. A Ford exclusive.

New malleable iron H-beam spring shackle provides superior front-end ride and durability. New design solves the problem of underlubrication, overtightening of bolts and the angular cocking which tend to "freeze" spring action with conventional shackle design.

Cockpit console instrument panel communicates fast. The linehaul panel has three sections. Primary information section in the center has speedometer and



tachometer. Hand-operated air controls grouped in left section have different shapes to allow drivers to identify them by "feel" alone.

E-Z Read gauges. All gauges in right-hand section of linehaul models are calibrated to show "normal" at "3 o'clock". A quick glance checks pointer alignment.

Greatest visibility for driver.

Ford's one-piece windshield is 15% larger than the nearest competitor's. Area wiped by the windshield wipers exceeds

the total windshield area of Ford's two nearest competitors. Drivers of Ford's new short-conventionals can see the road closer to the truck than in any other make.

Foot-operated emergency brakes. With air brakes, emergency stops as well as normal stops are made through the regular brake treadle. Driver need not grope for hand-operated brake in an emergency.

Comfortable environment for driver lessens fatigue. Cab is heavily insulated, and factors producing noise, vibration and harshness have been carefully designed out. Standard or optional aids to better driving include easier steering, less brake pedal effort, "breathable" vinyl seat trim, radio, integral heater/air conditioner.

4. JOB-MATCHED MODELS

The better idea inherent in a wide choice of models and chassis components that permits better matching of truck with job.

Choice of over 650 medium- through extra-heavy-duty models in the new LOUISVILLE LINE alone.

Short and long-conventional configurations. New short-conventional models from 15,000 to 54,000 lbs. GVW; up to 80,000 lbs. GCW. New long-conventional models from 23,500 to 64,000 lbs. GVW; up to 80,000 lbs. GCW.

Choice of 30 engines including 10 gas engines and 20 Diesels up to 335 hp.

Add some 381 "carryover" models. Ford's popular C- and W-Series tilt cabs, as well as medium/heavy-duty F-Series full-conventionals remain in the line to complement the new LOUISVILLE LINE.

And finally, Ford's better idea for fast parts and service availability: an unequalled big-truck network, covers the U.S. with 64 exclusive Ford Truck centers, 187 other heavy-duty truck dealers, and over 5,600 other regular Ford Dealers. Fast parts service, including air freight when needed from 23 well-located parts depots.

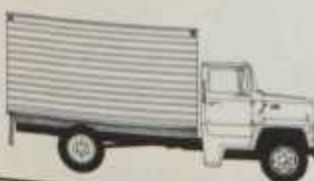
FORD HEAVY-DUTY TRUCKS



The big ones with the better ideas

Four basic configurations are offered to meet the needs of virtually all vocations. Power-train choices include a wide variety of engines, axles and transmissions.

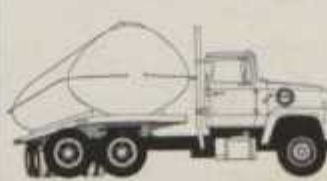
Medium/heavy LN-Series short-conventional (95.3" BBC) 15,000 to 25,000-lbs. GVW, (GCW's to 50,000-lbs.)



Heavy LN- and LNT-Series short-conventional (90.5" BBC) 20,000 to 54,000-lbs. GVW, (GCW's to 80,000-lbs.)



Heavy L- and LT-Series full-conventional (105.3" BBC) 23,500 to 60,000-lbs. GVW, (GCW's to 80,000-lbs.)



Heavy LTS-Series full-conventional with set-back front axle (105.3" BBC) 39,000 to 64,000-lbs. GVW, (GCW's to 80,000-lbs.) Available as 1971 model in mid-1970.



The Stooped Pigeon

We bring you this uncomfortable bird, the business man who travels in a company plane that won't let him stand up without getting a stiff neck.

Poor pigeon.

Next plane, he'll make it a point to check cabin height. (He'll discover that the Hawker Siddeley DH 125 lets even an above-average height passenger stand straight and tall.)

He'll look into the plane's ability to land on short strips near his destination. (The DH 125 does the job even on the most difficult strips.)

He'll lend an ear to noise level. (And find that the DH 125 is one of the quietest business jets made.)

And if our homing pigeon asks about service, he'll learn that Hawker Siddeley service is available 365 days of the year in city after city in the United States and around the world.

Air travel, we maintain, should not be for the birds. All in favor say tweet, tweet.



Hawker Siddeley DH 125

The businessman is a special kind of bird.



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MEMO FROM THE EDITOR

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PHOTO: BENJAMIN BRACE—BLACK STAR

Chiseled on the front of the National Archives building in Washington are the words: "What is past is prologue."

Cab drivers will tell you that means: "You ain't seen nothin' yet."

So it is with American business. U. S. companies, large and small, are headed for futures we can't even imagine now. But they will be building on their pasts. So it's not only useful, but also exciting, to take a look at the great moments and great men who have been responsible for the past achievements of American business.

Several months ago, Associate Editor Sterling Slappey conceived the idea of collecting these stories from leading companies. On the surface that sounds like an easy job. But it took Sterling (he's pictured above) literally hundreds of hours, telephone calls and letters, as well as personal visits, to see the project through.

As a result, you'll find this month's *Nation's Business* somewhat different from its usual format. The bulk of the magazine is devoted to "Great Moments and Great Men" of 27 of the companies whose names you'll readily recognize, ranging alphabetically from AT&T through Swift.

Most were written by the company's chairman, president or senior vice president. Ford, however, is an interesting exception. It commissioned Allan Nevins, Pulitzer prize-winning historian, to write its contribution.

We think you'll find all of them interesting.

• • •

As a result of the "Great Moments" project, I started wondering what a similar story about the National Chamber would look like.

Since it was established almost 58 years ago, the Chamber has had many great moments and great men. In the beginning it was President Taft who felt there should be a single national voice for business, and

this feeling resulted in the conference that established the Chamber of Commerce of the United States.

Its purpose is still the same—to be the spokesman of all business, large and small, in every section of the country.

One of its first actions was to start *Nation's Business*, the first issue of which appeared on Sept. 2, 1912.

Editor G. Grosvenor Dawe told readers in the first editorial:

"*The Nation's Business* will set forth periodically affirmative information and thought regarding our progress as a nation. Its columns will not be controversial. It will not touch partisan politics. It will assume that each public servant is well-intentioned and that he is entitled to that assumption until proved unworthy. *The Nation's Business* will not muck-rake, denounce, or defame."

That's still our philosophy.

• • •

But things change and so has the National Chamber, as well as *Nation's Business*.

Not being a historian—prize-winning or otherwise—I can hardly be an authority on the Chamber's "great moments." But I suspect I could spot the right one anyway.

I'd bet it was the day that a young man from Wichita joined its staff about 25 years ago. Since then, Arch N. Booth has been the moving force in this federation of business organizations. Since 1950, he's been executive vice president, working with the elected president each year, for the goals of business and the long-range good of the country.

Today the National Chamber, like American business, is thinking ahead to the challenges of the future. Like business, it has a great many "great moments" to look forward to.

Jack Woodbridge

**You need an awfully
if you're competing**



good slingshot with a giant.

There's a giant in the electric typewriter business. It isn't us.

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The clean hands typewriter

The Royal 565 is just like the Royal 560, but with one important extra. A new carbon ribbon dual cartridge. Your secretary just snaps it into the machine. When it's finished, she just lifts out the dual cartridge and throws it away. She never touches the inked ribbon. And the Royal 565 costs a lot less than electrics from the giant.

We know that we're up against some pretty strong competition. That's why we're bringing out these two new machines. They're just what you need in office electrics. Economical, too.

So prepare yourself, giant. David has a new slingshot.

We're growing fast

These typewriters are only one example of how things are growing at Royal. We need more people to help us in the

growing. Product and market planners, salesmen, accountants, secretaries, servicemen, clerks. We're moving people into Connecticut and hiring local people, too. So if you're looking for a good company to grow with, get in touch with Royal soon.

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There's a vast network of Technical Service Engineers, all across the continent — over 3000 of them. Because we don't believe in selling you a typewriter, copier, or adding machine and then forgetting about you. All our men are trained to keep your Royal equipment in top working order. And to be quick about it, too.

We're growing stronger

Things are happening at Royal. Because we're moving with the times. Bringing out exciting new products. Hiring new people. Opening new facilities. And looking for more dealers. We just want you to know that we're going to be right there when you need us. With everything you need to make your office a more efficient place. Because we know your needs are going to be greater than ever. And we're going to be greater than ever, too.



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LETTERS

BUSINESS HAS A POSITIVE STORY TO TELL

• I was much interested in your "Memo From the Editor" column in November.

I have argued for some time that the business community has been the butt of accusation and recrimination for much of what is wrong in our nation's communities, including urban problems, environmental problems and so on *ad infinitum*.

Many of our corporations have made a substantial and vital contribution to resolving the nation's social problems. But they have been remiss about telling their story.

For example, companies in our industry are constantly accused of despoiling or polluting the nation's waters or air or land surface. Not enough has been done to inform the American public, our legislators, our media, about our many constructive efforts in environmental control. We have made a start in the right direction.

ARTHUR REEF
Director of Public Relations
and Advertising
American Metal Company, Inc.
New York, N. Y.

Coal facts set down

• You quote the National Planning Association [November] as forecast-

ing the 1980 output of the coal mining industry at \$1.6 billion, compared to a current output of \$1.7 billion.

Yet, in the same issue, you quote the U. S. Bureau of Mines and the Edison Electric Institute as estimating the nation will need 737 million tons of coal in 1980, compared to 497 million tons in 1968.

We believe the latter estimate is about correct—and therefore the NPA figure is grossly out of line, because there are no immediate prospects for reductions in the cost of producing coal. In fact, the new mine safety legislation will no doubt impose substantial cost increases on underground mines.

As shown on page 32 of the issue, electric power output in 1980 is expected to increase about 1,684 billion kilowatt hours over that of 1968. If this additional power were all to be produced from coal, it would require an increase in coal production of about 670 million tons per year. Even if atomic power grows to the 145,000 megawatt figure expected by AEC in 1980 (and plant ordering is well behind what is forecast), the atomic plants will produce only about 1,000

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NATION'S BUSINESS, 1615 H STREET N. W., WASHINGTON, D. C. 20006

After years of faithful service,
the electronic calculator
has been reduced
to this:



This is the 1160. The new Friden* Electronic Calculator. It's less than 13" wide.

Years ago, Friden introduced the first American electronic calculator. It was called the 130 and it was revolutionary. It was also big and heavy.

Now take a look at the new 1160. Thanks to integrated circuitry, it's much smaller than the 130. And much lighter.

We also added new features. Like a bright new cathode ray tube that shows *both* factors of a problem—with triplet spacing for easy reading. A "flip-flop" that inverts for division. An "X-plus" key so you can

multiply and add in one step. A quieter keyboard. The 1160 also has two display registers, plus two more that automatically retain intermediate answers. There's even a separately addressable memory.

When we reduced the size of our new calculator, we found we could reduce the price, too. Fact is, you can buy a new 1160 for less than some *mechanical* calculators.

Also available: the 1162 with automatic square root. For a demonstration of either model, call your nearest Friden office. Or write Friden Division, The Singer Company, San Leandro, California 94577.

* A TRADEMARK OF THE SINGER COMPANY

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Beware the coffee service that gives you coffee, but not service.



When you want your coffee you want your coffee, and not excuses why you can't have it. That's why Cory includes a complete service staff in each coffee service plan.

It means you never have to wait around for repairs or supplies because there's always someone on the job.

Fact is, there's a Cory representative waiting to hear from you right now. So why not give him a call? He'll give his all for you.

CORY COFFEE SERVICE PLAN

Look in the Yellow Pages under Coffee Service,
or write: Cory Coffee Service, Department NB1,
3200 W. Peterson, Chicago, Ill. 60645
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clock helps small
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A nation-wide Executive Loan Service designed for responsible executives as a convenient supplementary source of personal credit. No collateral, no endorsement, no embarrassing investigation. All details handled by mail from the privacy of your office. If you pre-pay we refund all unearned interest.

References:

First National Bank of St. Paul
Northwestern National Bank of St. Paul
First National Bank of Minneapolis
Northwestern National Bank of Minneapolis

For full particulars write
Mr. A. J. Bruder, Vice President

Industrial Credit Plan, Inc.

620 Hamm Building
St. Paul, Minnesota 55102

LETTERS

continued

billion kilowatt hours in 1980—leaving an additional 684 billion increase for the other energy sources.

Coal, which supplies about two thirds of the fossil fuel used to produce electricity, should get about 400 billion kilowatt hours of the remaining increase—and this means that coal's electric utility market should increase about 160 million tons. Some of our other markets should increase, too—particularly our export market.

The coal industry's problems for the future involve primarily the production of coal—not finding a market for it.

BRICE O'BRIEN
General Counsel
National Coal Association
Washington, D. C.

Sen. Goldwater comments

• I read the article "Political Power Patterns Are Changing" [November] with much interest, and enjoyed it tremendously.

BARRY GOLDWATER
U. S. Senator from Arizona
Washington, D. C.

Revenue sharing explained

• I thought you'd like to know I received a number of letters on the "revenue sharing" interview ["Slicing the Federal Tax Pie," December] including one from the chairman of the board of one of the largest corporations in the country. He stated that he found the article not only enlightening in many areas but that it cleared up doubts he had.

PAUL W. EGGERS
General Counsel
Treasury Department
Washington, D. C.

What about smut?

• Congratulations for running "Should Smut Be Curbed?" ["Sound Off to the Editor," November].

I would be very interested to learn how the responses went.

ANTHONY J. VACCARI
Vice President
Widrick & Miller
New York, N. Y.

[Editor's Note: 10 to one against smut, as reported in the December issue.]

EXECUTIVE TRENDS

by John Costello
Associate Editor

MOST WANTED MANAGERS

- COUNT YOUR GUESSINGS
- SALARY SQUEEZE AT TOP
- RECRUITING QUIZ
- ANNUAL REPORTS GROW

Upper bracket job forecast: Sunny

WANTED: Manufacturing executive for well-established, growth-minded firm. Prefer 10 years' experience. Must have engineering degree. Salary open, plus stock options and fringes.

You'll see a lot of ads like that in 1970, despite any business slowdown, one executive recruiter says.

"Demand for top-level executives—\$30,000 to \$40,000 a year and up—will continue to outstrip the supply for this year and next," adds John L. Handy, president, Handy Associates, consultants specializing in executive search.

"But manufacturing executives, with industrial engineering background, will easily be the most wanted. There'll be a 30 per cent increase in demand for them.

"This sharp upsurge results from the cost-price squeeze brought on by inflation and Washington's effort to halt the upward spiral.

"Well-run companies are facing up to this problem. They're emphasizing plant efficiency and engineering improvements to stem increasing costs and perhaps even effect reductions.

"Next most sought-after manager will be the cost-control executive. In 1969, there was high demand for financial control managers. It will continue this year."

One result: Seasoned managers with good track records are more and more choosy about job offers.

"Even their juniors are cashing in," says Mr. Handy.

"Young, entrepreneurial, profit-

motivated executives, under 30, are demanding and getting salaries in the \$20,000 class—just on potential, not past performance."

Looking before your leap

Are you too guess-prone?

"Jumping to conclusions is one of the more common and most costly errors managers make," the International Society for General Semantics says.

"And it's a tendency that can be detected."

Here's a sample quiz, part of a test developed by Northwestern University Prof. William V. Haney, that the Society uses:

STORY: Babe Smith has been killed. Police have rounded up six suspects, all of whom are known gangsters. All are known to have been near the scene of the killing at the approximate time it occurred. All had substantial motives for wanting Smith killed. However, one of these suspects, Slinky Sam, has positively been cleared of guilt.

After carefully reading the story, determine on the basis of that information whether the statements below are T—definitely true; F—definitely false, or ?—may be true or false.

1. Slinky Sam is known to have been near the scene of the killing of Babe Smith.
2. All six of the rounded-up gangsters were known to have been near the scene of the murder.
3. Only Slinky Sam has been cleared of guilt.
4. All six of the rounded-up suspects

PROBLEM:

Cut labor turnover to 4% or less

SOLUTION:

UTAH!

1.27 to 4% labor turnover rates are reported by 10 national electronics firms presently located in Utah.

Productivity has been realized—and categorized—as "the best" among Utah firms with multi-plant operations across the nation.

Quality labor that is "unspoiled," educated, flexible—and ready to make you forget labor pains and concentrate on growing pains—is available now in large numbers.

Write:

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State Capitol, Dept. 127
Salt Lake City, Utah 84114



UTAH!
The problem solver.

EXECUTIVE TRENDS

continued

were near the scene of Smith's killing at the approximate time it took place.

5. The police do not know who killed Smith.

6. All six suspects are known to have been near the scene of foul deed.

7. Smith's murderer did not confess of his own free will.

8. Slinky Sam was not cleared of guilt.

9. It is known that the six suspects were in the vicinity of the cold-blooded assassination.

"Obviously, if you get all answers wrong, you're too ready to jump to conclusions," says Prof. Haney. "And if you get them all right, you've obviously done well."

"But the real value is to alert you—if you've answered any wrong at all—that you may need some beefing up in your decision-making processes."

ANSWERS: 1-T, 2-?, 3-?, 4-T, 5-?, 6-?, 7-?, 8-F and 9-?

A source of trouble in coming up with answers which satisfy the Society is the hurried assumption that a killing necessarily is a murder, a foul deed, or a cold-blooded assassination.

Sample copies of the Uncritical Inference Test are available from the Society, 540 Powell St., San Francisco, Calif., 94108.

Caught in a salary squeeze?

Lots of top executives are.

Often, their subordinates' pay has risen faster than theirs.

"Take the last 12 years," says John T. Bourke, a compensation specialist with A. T. Kearney & Co., Inc., management consultants.

"In that time, middle management compensation rose 67 per cent. But the top man's rose around 50 per cent."

"And there are reasons why that trend will continue. For example:

- "The high cost of college graduates. Lots of people are bidding for them—government, the universities and industry. Starting offers to 'fresh-outs' are bumping up against salary levels of veteran employees. In the past five years, starting salaries for graduate technical people have gone up 8 per cent annually.

- "The new career outlook. It's no longer fashionable to stick with the same firm, year after year, climbing the ladder with steady but small pay hikes. The guy who moves, if promotions are slow, is looked on as a guy with 'drive.'

- "More emphasis on cash. Stock options and restricted stock plans are losing appeal. Past IRS rulings—and pending tax changes—will give greenbacks more oomph in the 70's.

- "More mobility. There's a national market for professional men and managers today. Even the company snugly located in a small New England or Southern city can't keep key people with below-average pay."

Any easy way out of this bind?

"Nope," Mr. Bourke says.

"Companies that don't want to lose talent face a painful decision. They'll have to update their management salary structure every few years—and that means the boss's salary, too."

What an engineer will cost you

"Give him a technical degree, and you've got a rolling stone."

That's the cynical view one corporate recruiter takes of engineers and other technical personnel.

"They're not that footloose," Deutsch, Shea & Evans, Inc., says. "But their turnover is fairly high. Our studies show a rate of about 9 to 10 per cent a year."

Furthermore, they're expensive to replace.

"Average cost per hiring for technical people was \$1,658 in 1967," the New York firm says its studies show, and "\$1,700 in 1968 and about \$1,765 last year."

Know your company's recruiting program?

All executives should.

But many don't.

That's what the Bureau of Industrial Relations, University of Michigan, says. It has compiled a quiz to test your recruiting IQ. Here are some questions from it.

Do you know:

1. If your company has written recruiting policies?
2. If it conducts training programs for campus recruiters?
3. Whether you lost more than 10 per

cent of your candidates because your salary offers were too low?

4. How much it costs you per student to hire a college graduate?

5. How your salary offers compare with the going rates for Bachelors and Masters?

6. Whether you're getting 50 per cent of those to whom you make final offers?

7. How you pick the schools to visit?

8. When's the best time to make an offer to a student?

9. How to keep campus recruiting from disrupting your in-company salary program?

It's a tough quiz. If you say "No," or "Don't know," to any question, BIR says, you need to:

- Brush up on your company's recruiting policy—or write one, if none exists.

- Pick and train your recruiters properly.

- Integrate recruiting practices into your total manpower policy.

Fatter, fact-filled, flossier—and more costly

It's the new look in the annual report.

In 1959, 37 per cent were 24 or fewer pages. Last year, only 16 per cent were. Seven out of 10 ran 32 pages or more.

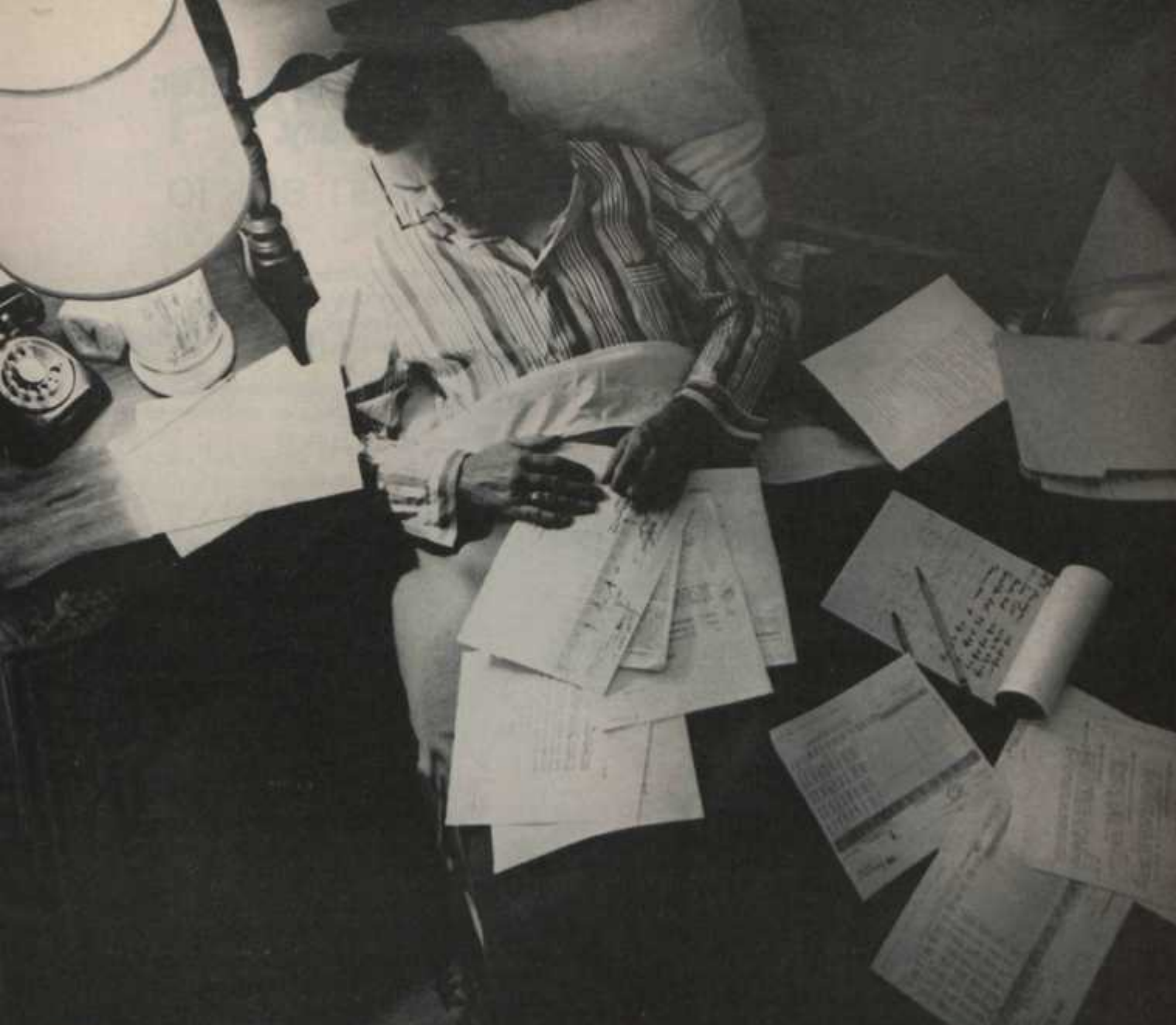
That's what E. F. Schmidt Co., Milwaukee printing specialists, found from a study of annual reports of the 100 largest U. S. corporations. Some other statistics:

- Nearly three times as many (72 per cent) now use executives' photos as in 1959 (25 per cent). "The trend is to informal shots that stress youth and vigor," the Schmidt company says. "It's meant to burnish the corporate image, not salve the executive ego."

- That standard feature, the president's letter, is getting longer. Fifty-five per cent ran at least two pages last year; 30 per cent did in 1959.

"But the language is simpler, more informal," the company says. "It's written in the kind of English even Aunt Jessie in Dubuque can understand."

- There's also a trend toward flossier, more costly, editions. Eighty-seven per cent used coated stock last year, and 90 per cent used full color inside.



The cure for the great American nightmare.

It's one thing to work all day managing the business.

It's quite another thing to work all night managing the paperwork.

But too often that's just what happens.

Because a lot of businessmen think they're too small for a computer.

If this sounds a little bit like you, we'd like to tell you about a new computer especially made for small businessmen.

It's called System/3. IBM's small business computer.

System/3 is like no other computer we've ever made.

It uses a tiny punched card that can actually soak up more information than one three times its size.

Of course, System/3 will take care of the routine jobs that bother most businesses. The payroll. And the billing.

But it'll also go a long way in helping you with more complicated jobs.

Like helping you spot sales trends in time to do something about them.

Or getting a reading on which are your most profitable items.

But the big thing is to bring an end to the great American nightmare.

And that's what System/3 is all about.

Because it'll manage the paperwork.

While you manage the business.

Sleep tight.

System/3. The small business computer.



IBM®

Tell someone you like about Lark's Gas-Trap™ filter. He may remember your anniversary.

Use your head.

Maybe your husband already knows that almost 90% of cigarette smoke is gas. And that Lark's Gas-Trap filter not only reduces "tar" and nicotine, but gases as well.

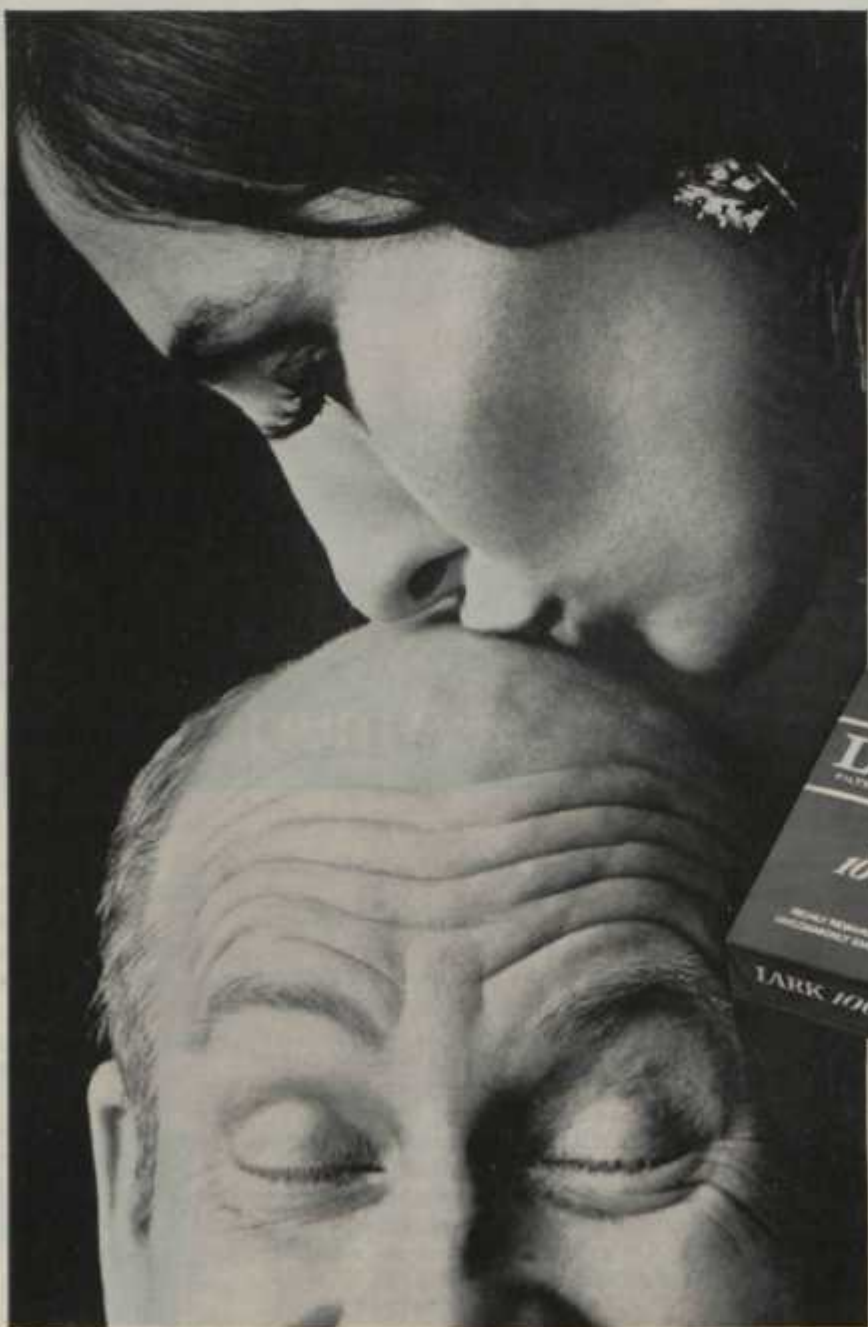
But you can still tell him a thing or two. For instance: Lark's Gas-Trap filter reduces certain of those harsh gases by nearly twice as much as any

other filter on any other popular brand!

And that Lark spent enough research money on the Gas-Trap filter to buy full-length minks for all the girls in the Junior League.

Here's your *Pièce de Résistance*: tell him Lark's Gas-Trap filter is patented (U.S. Patent No. 3,251,365) so it's unique—just like him.

He'll listen.



King Size
or new 100's.



PANORAMA

of the nation's business

By
Vernon Louviere
Associate Editor

American Has a Way With Young Women

Pert American Airlines stewardesses are helping to lift spirits in ghettos across America.

Perhaps in the full sweep of all that is being done to defuse ghetto tensions, "Operation Grace and Glamour" may go by unnoticed. But it has left its mark on hundreds of underprivileged young women who have never been inside a beauty salon or leafed through the pages of *Mademoiselle* magazine.

American Airlines sends multiracial teams of stewardesses into the ghettos to conduct courses for teen-age girls on makeup, grooming, charm, poise, attitudes and job preparation.

"We believe this is a practical way to encourage and help these youngsters," says C. S. Collins, an American vice president. "The stewardesses who volunteer to work in this program are uniquely equipped by training and personal dedication. They are young enough themselves to relate easily to the teen-agers' interests and to teach them to help



Stewardess Teresa Watson shows two teen-agers ways to use makeup.

themselves." Teaching these deprived youngsters the importance of developing self-confidence and self-respect is what it's really all about.

A black stewardess, for example, may use this kind of approach before she begins a course:

"Realize that you are 'somebody.' Don't use your color as a crutch. Set standards and goals for yourself and work to reach them. Stand tall. To gain confidence and success, you need to look better and feel better about yourself.

"As never before, the world is an open door. Open it."

The airline works closely with youth agencies, the Urban League, community antipoverty groups, churches, schools and the YWCA in setting up courses. The stewardesses, all highly trained in grooming and proper social graces at the American Airlines Stewardess College in Ft. Worth, Texas, eagerly offer their services.

Andrea Buckmon, 25-year-old stewardess from East Elmhurst, N. Y., tells why she volunteered:

"I am black and I want to help my people. I feel that I have something to offer."

What makes this all worthwhile was summed up by one teen-ager who approached a stewardess after a demonstration and said diffidently, "Thank you so much for my new face."

Returning Beauty to the Land

When Friendship Park in eastern Ohio is completed it will be a show-place of rustic beauty spread out over 1,150 acres of rolling countryside.

But it was not too long ago that on this same site huge mechanical monsters were gouging the earth, bringing coal to the surface to keep the wheels of industry turning.

Friendship Park is land reclamation at its best. It is a dramatic example of what can be done when a strip mine has given up its last chunk of coal and is abandoned.

The land on which Friendship Park is being built a few miles southwest of Steubenville was donated by

Consolidation Coal Co. to the people of Jefferson County. Eventually it will serve the recreational needs of a million Ohio and West Virginia residents in the area.

Like other mine operators Consol does not leave the terrain scarred and gutted after strip mines have served their purpose. Bulldozers move in and restore it to its original appearance. Consol's program is often referred to as "a model for the coal mining industry."

Throughout areas where strip mining has had its day you can see the evidence of reclamation by mining firms in the form of lush meadows, picturesque lakes and ponds, and tree-covered slopes. In some cases, even Mother Nature has been outdone.

Aside from its usefulness, Friendship Park will show what can be done to make reclaimed land attractive. Ralph W. Hatch, president of Consol's Hanna Division, says of his company's role:

"It is becoming increasingly important for industry to take an interest in community activities. We at Hanna pride ourselves on being a good neighbor. We feel a responsibility to our community. Production, reclamation and community participation go hand in hand for Hanna employees."

Friendship Park eventually will feature fishing and boating, a wildlife refuge, a ski slope, a golf course, an outdoor amphitheater, an agricultural experiment area and many other attractions to lure Americans hungry for recreation.

Savings for You and the Government

Perhaps there's a way to lick the paper work jungle after all, and the computer may prove to be the ultimate weapon.

Swift & Co. of Chicago, the federal Social Security Administration and the Illinois Division of Unemployment Compensation have come up with a plan that could mean substantial savings for both employers and government.

Under a system just getting under way in Illinois, companies submitting quarterly employee wage reports on magnetic computer tape to SSA can use the same reporting specifications to satisfy both state and federal requirements.

Today, many companies report on tape only to the federal government and use paper forms to meet the re-

quirements of individual states. The hours of extra work and expense involved in this duplicative chore are incalculable when measured against the thousands of businesses forced to file in this fashion.

"Both business and government require an ever-increasing amount of detailed information to support their operations," Donald P. Kelly, vice president and director of corporate planning for Swift, told *Nation's Business*. "The demand for this data represents a growing expense burden to every segment of the business community."

"This new program is the result of the cooperative efforts of both government and private industry. We consider it to be the essential format for the future if we are to reduce the tremendous burden of paper work."

Initially, the coordinated program is available only to companies reporting employee wages in Illinois.

However, 19 other states have computer facilities and the system could be used in them as well.

The system is highly flexible. Small businesses using outside computer services to prepare their payroll records could employ it. So could computer service firms which handle wage reports for several different companies.

Swift is ideally suited to participate in this pioneer project since it operates 30 businesses ranging from meat packing to petroleum and has payroll operations in all 50 states.

Nationally, 5 658 different companies now report some nine million employee wage details to Social Security headquarters each quarter on magnetic tape. It is estimated that for each 1,000 wage items it receives in this fashion the federal government saves \$13 in administrative costs under old-fashioned reporting methods.

Whirlpool Tunes in the Consumer

A touch of Broadway is being used to help bridge the communications gap some people in and out of government feel exists between appliance manufacturers and consumers.

Whirlpool Corp. has gone on the road with a new kind of musical show, "Care-A-Van," that entertains at the same time it tells consumers how to buy, use and get service for major home appliances.

"Care-A-Van," featuring Broadway musical personalities, has received rave notices. Requests are coming in from many major cities to be added to the schedule.

The show was previewed recently in Washington before a group of government officials and Congressmen concerned with consumerism, and drew considerable praise. Addressing this group, Whirlpool Chairman Elisha Gray II said:

"We build 28,000 appliances per day in seven scattered factories. Con-



Elisha Gray thinks customers feel out of touch with the producer.

sequently, we must sell 28,000 appliances per day. But each is sold one at a time to an individual consumer to whom a new appliance is a major

investment expected to perform its function effectively and economically over a period of years."

Whirlpool products move through the hands of 7,500 dealers and wholesalers and an even larger service organization, Mr. Gray noted.

"It's no wonder then," he explained, "that the customer feels out of touch with the people who design and build the product."

The "Care-A-Van" performance, which runs an hour and a half, makes no sales pitch for Whirlpool products. Its only message, cleverly imparted in song, is how to buy an appliance, how to live with it, and how to cope with uptight topics like warranties and service.

Variety, the magazine of show business, reported:

"The concept of Whirlpool's 'Care-A-Van' is probably the most unselfish in sponsored show biz. In this display there is not a word of self praise, not a commercial and not even a sign on the stage proclaiming its auspices. All it does is to tell how to buy and how to care for home appliances."

How to cut the cost of business equipment and services —and increase your profits.

Now you can put at your fingertips impartial, comparative data on every major business machine... and every vital business service.

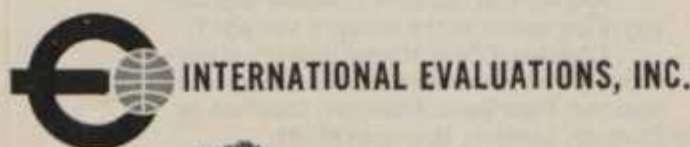
This data is based on scientifically conducted performance tests under actual working conditions. It enables you to determine—quickly and accurately—which products and services are best suited to your organization's specific needs and budget. Such evaluations have long been available on consumer products; now they are available on business equipment and services.

Until now, when you wanted to know which business machine or service would best meet your organization's requirements, you have had to rely on competitive literature, salesmen's visits, and demonstrations. All of which take much precious time. And still do not give you objective, complete data. Now International Evaluations provides you with objective, thorough evaluations.

Office conditions vary, of course. Equipment that is right for one office may be wrong for yours. International Evaluations takes this into account. Our tests are based on clearly defined Uniform Performance Standards* for each kind of product. These standards take into account all the characteristics that make a product suitable or unsuitable for use in a modern office—frequency of use, availability of repair service, noise level, vibration, durability and so on. You can then match your requirements to these standards and see which makes and models are best suited to your specific needs. For example...

- Will a \$600 machine meet your office needs... or will you need the \$1200 model?
- Is the calculator you have outdated? Would you save money through increased efficiency by replacing it with a new model?
- Do your employee benefit programs cost too much money?

* Uniform Performance Standards are prepared under the direction of the International Evaluations Institute in cooperation with experts in industry, government and universities.



1324 Motor Parkway, Hauppauge, New York 11787



International Evaluations makes this information available for your daily reference through a bi-monthly journal, a newsletter, a full computer service and even a comprehensive handbook. We cover every major make and model of business equipment—and every vital service—on today's market, such as the ones in this partial listing:

- programmable calculators
- electrostatic copying machines
- check protection systems and machines
- electric and manual typewriters
- computer service bureaus
- group dental health plans
- dictating machines and systems
- offset duplicating machines
- filing and information storage systems
- electronic calculators

This service can save you thousands of dollars in a year. It can, in fact, easily pay for itself in a single purchase of the right—versus the wrong—calculator or copier for your office. Your investment in one such machine alone can equal \$300-\$400 or more than a thousand dollars. As stated at a recent AMA seminar, a thousand dollars saved by sound purchasing management can equal ten thousand dollars in increased sales.

By way of introduction, you are invited to examine our first report without charge or obligation. The cost of International Evaluations' services is less than \$20 a month but before even asking for your order we know you will want to know more about us. Fill in the spaces below—or attach your business card—and we will send you complete information about International Evaluations and a request form for the free first report.

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Company _____

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City _____ State _____ Zip _____

Switching to Olds for your company cars makes sense all the way up the line.



Olds has a fleet car for every purse and purpose. Front drive Toronados or Ninety-Eights for executive row. Value-packed 88s in the big-car field. Economical Cutlass models when cost-cutting counts.

Remember, Olds traditionally brings back a bonus at trade-in time. So you can upgrade the corporate image without increasing your investment.

And your investment pays handsome dividends. For example, you get positive valve rotators in all V-8s for peak performance thousands of miles longer.

Flo-Thru ventilation for draft-free driving. Deep-cushioned, double-padded seats for extra comfort. Stronger, longer lasting bias-belted tires. Hidden windshield wipers. A radio antenna concealed in the windshield glass. The list goes on and on.

Any wonder our fleet business is growing twice as fast as the industry average?

Check out Olds at your dealer's showroom. Or write for our Fleet Facts Book, to: National Fleet Sales Manager, Oldsmobile Division, Lansing, Michigan 48921.

Oldsmobile: the great escape from ordinary fleet cars.



SOUND OFF TO THE EDITOR

IS YOUTH TODAY REALLY WORSE?

They're surly, dirty-mouthed, uncombed, shameless and ungrateful. They're serious, knowledgeable, honest, idealistic and courageous. Depends, it seems, on who's doing the talking.

Nearly everyone has a strong opinion about young people today. We've had two straight decades of youth worship—in movies, ads and politics. But the youth symbol of the early 50's is hardly the same cat today.

The crew-cut, shiny-faced type in tweed jacket has given way to the questioning cynic, who abhors conformity with his elders' ideas of dress, manner or thought.

Every generation has mumbled about kids going to hell in a basket. But some today think America's young have struck bottom. They point to increasing use of marijuana

and drugs, to lower sexual barriers and to the things youngsters say.

Many older folks especially resent being called "irrelevant." They also dislike youngsters' dismissing much of America's history and ideals and culture as irrelevant.

Arthur Waskow of the Institute for Policy Studies describes today's youth as "members of the post-scarcity society." He explains: "They haven't had to work in order to eat."

Dr. Waskow, speaking before the World Future Society in Washington, predicted "a running, disappearing, exploding civil war" between the working classes and the nonworking classes. "The shock troops of one side will be the cops," he said. "The shock troops of the other side will be hippies and yippies."

Those defending today's youths

contend the troublemakers, the demonstrators, the drug-takers are a definite minority which just happens to get all the attention. The typical American youngster, they say, is as clean-cut and wholesome as ever. And, they add, he is more knowledgeable about the world around him than was his counterpart of yesteryear, has genuine compassion for the downtrodden and is at least more open and honest about sex.

If some kids are bad today, their defenders say, it's because they were brought up in a world of tension—two decades of Cold War and the threat of atomic annihilation. They blame the "rat race," the push for materialistic things.

Nearly everyone has a decided opinion. What's yours? Is youth today really worse?

Jack Wooldridge, Editor
Nation's Business
1615 H Street N.W.
Washington, D.C. 20006

Is youth today really worse?

☐ Yes ☐ No

Comments:.....

.....

.....

.....

.....

.....

Name and title.....

Company.....

SOUND OFF RESPONSE

SOFTENING CRIME'S IMPACT

A good many people believe the state has a responsibility to pay victims of crime, but many others feel the criminal should be made to pay—in damages to his victim as well as by being punished for the crime.

This is reflected in the opinions of NATION'S BUSINESS readers who responded to the December "Sound Off to the Editor" question, "Should Crime Victims Be Paid?"

About half feel the state should see to it that those victimized by the rising tide of crime in the country receive compensation.

The make-the-criminal-pay theme runs through many of the answers of those opposed, but they offer other arguments, too.

"If crime victims are paid it occurs to me you are simply encouraging the victims not to react in a very strong fashion to social injustice," writes Fred M. Martin, executive vice president of Don Hoskins, Inc., Geneva, Ill. "In principle, you probably would even encourage collusion in the area of the victim and the criminal."

On the other hand, Dr. Carl L. Dean of Lubbock, Texas, says, "Knowledge that crime losses would be repaid, even in part, would encourage some victims of extortion, or business take-over, to resist and/or cooperate in prosecution."

"Until local, state and national governments, and police and citizens, meet their responsibilities for the crime situation, I believe that victims should be paid for injuries and actual expenses, including family support without limit," R. E. Remund, chairman and treasurer,

T. K. Gray, Inc., Minneapolis, Minn., feels.

H. Harold Carter, business development director of the Atlanta, Ga., Chamber of Commerce, says, "If a crime victim is paid, some or all of the money should come from work done by the criminal on road gangs, etc."

K. R. Hollinger, president, W. H. Davis Co., Westminster, Md., writes, "I would favor payment of such losses. Actually, this is nothing more than paying for losses caused partially by the tax-supported departments not being able to cope with the situation."

"I believe the criminal should be made to perform useful work while imprisoned and what he earns be paid to the victim," says H. K. Foute, Drake Manufacturing Co., Harwood Heights, Ill. "The criminal should remain imprisoned until he has completely paid his debt. Why should the taxpayer be responsible?"

William J. O'Connor, attorney, Milwaukee, Wisc., states, "It would be farcical if, in addition to the enormous cost of paying for the imprisonment of criminals, the public should be called on to pay for their wrongdoing as well."

"The government should not be responsible for our bad luck because we have lost money to a gunman, nor responsible if we are injured," writes B. T. Shaw, president, Shaw Printing Co., Dixon, Ill. "If the government is held responsible we would soon expect the government to pay for our home if it burned down or was hit by cyclone, or for any other reason."

"I am against the crime victim

being paid by taxpayers' money," asserts Robert Bracke, manager, Tulsa-Jetco, Inc., Claremore, Okla. "The criminal should be liable. Any monies due him while in prison should first be given to the crime victim until all costs have been paid. Although in a sense the taxpayer is still paying, he won't be paying double."

Vincent Botarelli, president of the Montowese Convalescent Hospital, North Haven, Conn., favors compensation but feels limitations should be set to prevent fraud. In compensating for property damage, Mr. Botarelli believes, some consideration should be given to the replacement value.

"An organized society maintains law and law enforcement agencies to protect its citizens," writes William Schandolph, general manager, Tetley Tea Division of Beech-Nut, Inc., Savannah, Ga. "When an individual suffers physical harm or property loss because he is the victim of a crime it means that the society has failed in its purpose and obligations. Society (the rest of us) then should compensate the innocent victims for what is essentially the failure of our organization."

"Crime should be punished to a point whereby it becomes non-profitable," Irving G. Clark, a Coloma, Mich., businessman, says. "Then, like a nonprofit business, it would fail. Our greatest need today is to prosecute the criminal so as not to persecute the victim."

"Make the criminal work to pay off all damages suffered by his victim," suggests Vern E. Westlund, president, Westlund Dental Studio, Minneapolis, Minn. "He created this situation. Crimes will continue unless and until the punishment meets the crime."

Carmon I. Campbell, State Farm Insurance agent, Newaygo, Mich., is in favor of crime compensation but adds, "Let's, however, quit going out of our way to be nice to criminals. Let's force them to pay the victims or their families. In my opinion the public is being forgotten. What kind of a trial do victims get from the people?"

Robert E. Walker, vice president, Hoffman & Walker Corp., Syracuse, N. Y., believes compensation of this type would only invite increased criminal activity because victims would have less reason to resist.

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mummm

Just because some poor soul has to hum his way through our National Anthem, is that any reason to think he's unpatriotic?

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QUARTERLY OUTLOOK SURVEY

GREEN LIGHT FOR A BUSINESS SPEEDUP

Top executives list factors which they say will push the economy from a slowdown to an accelerated pace

As 1970 gets under way American businessmen still are optimistic about the future.

They believe that the mild slowdown first noted last summer in some divisions of business will be of short duration and that economists are correct when they predict the new year will wind up in dandy shape for commerce, industry, services and manufacturing.

They see a slight, although general, increase in consumer buying coming up; a meaningful increase in housing starts taking place this year; a gradual lowering of interest rates starting in the spring and a reduction in the Viet Nam war's drain on national resources.

These are the carefully considered estimates of the vast majority of 793 company presidents, chairmen of boards, vice presidents and company economists who took part in the latest NATION'S BUSINESS Outlook Survey.

Thirty-three times, top American executives have been asked by NATION'S BUSINESS to assess prospects for their own companies and for the

national economy. Their consensus have been outstanding for perspicacity and the surveys have now become a leading privately-conducted business barometric reading.

Four executives in four sections of the nation agreed that conditions are due soon to improve. Their answers summed up the bulk of reaction.

William E. Petersen, president of Irving Trust Co., New York, said: "There is a possibility of recovery later in 1970 as housing activity picks up steam in the face of easier monetary conditions, and business capital spending speeds up in response to an improved corporate profits picture."

In the Midwest, John C. Suerth, president of Gerber Products Co., the Fremont, Mich., baby food processor, predicted: "The present slowdown will continue into the first half of 1970, but as diverted war spending is adjusted into domestic goods and services there will be a gradual turnaround. The government probably will ease the anti-inflation measures if there are indications that the slowdown is turning into a recession."

Richard H. Rich, chairman of

Atlanta's Rich's department store, looked for the slowdown to be eased by lower cost of money and by increases in construction.

In San Francisco, M. M. Christy, president of The Western Pacific Railroad Co., predicted early improvement with the easing of monetary restraints—which he considers the major factor in reviving growth.

How long?

NATION'S BUSINESS had posed this question: "How long do you look for the present slowdown in business to last and what do you think will be the main factors helping with the revival?"

Twenty-nine respondents answered simply: "Not long." Six months' duration was seen by 333 executives; up to one year was anticipated by 136; a year and a half to two years was the pessimistic view of 59. No slowdown was acknowledged by 84 businessmen while the remainder either would not hazard an estimate, said they did not know or predicted the slowdown would continue until the Viet Nam war ends, whenever that is.

Here is a collection of answers

Green Light for a Business Speedup *continued*



Money diverted from war spending should go to reduction of taxes, says W. F. May, chairman, American Can Co.



Interest rates will fluctuate during 1970, according to William E. Petersen, president, Irving Trust Co., New York.

picked at random from the mountain of returned questionnaires.

Thomas L. Phillips, president, Raytheon Co., the Lexington, Mass., electronics giant, felt "removal of monetary and fiscal restraints" will trigger revival.

"Easier money and a slowdown in Viet Nam," wrote Bancroft G. Davis, vice president of the Madison Fund, a New York investment company.

"Revival will come mainly from reduction in our participation in Viet Nam," said Harrison W. Cole, manager of economic and marketing analysis of Johns-Manville Corp., New York.

"Consumer needs and demands" will start the revival, said D. A. Koepfel, president of the Los Angeles-based Blue Chip trading stamp company.

War conditions and housing starts are the two important factors in recovery, according to J. M. Hamrick,

president of Hamrick Mills, Gaffney, S. C.

Richard Lloyd Jones, president of the *Tulsa Tribune* newspaper, Tulsa, Okla., said his company hasn't really experienced a slowdown. He did feel an end to the war, plus normal credit rates and more construction, would be great boosts.

Interest rates: Which way?

Another question which drew detailed answers was: "What will be happening to interest rates in the next year or so?"

They will be coming down, said 531 respondents, while 173 said they would remain as high as they are now. Only 41 saw further rises and 30 would not take a chance in estimating.

Stuart T. Saunders, chairman of Penn Central Railroad, Philadelphia, was cautious, albeit optimistic: "This will be determined by success of the fight against inflation, but it now ap-

pears there will be a slight easing of interest rates early in 1970 to be followed by additional downward drift if the economy slows down markedly."

A. J. Stokely, president of Stokely Van Camp food processors of Indianapolis, Ind., had a short answer: "Down somewhat."

William M. Rees, president, Chubb and Son, Inc., New York, said, "Rates will decline if the fight against inflation continues, maybe by 100 basis points."

"Funding of deferred or temporarily financed debt will periodically exert counter pressures."

James H. Binns, president, Armstrong Cork Co., Lancaster, Pa.: "Short-term rates may be two percentage points under current levels by April-May 1970, except for the prime rate, which may come down by only one point. Long-term rates will not fall as much."

PHOTO: PETER VANDERBEEK



Lower personal taxes and easier dealer credits will give a boost to Magnavox Co. business, says R. H. Platt, president.

Gabriel Hauge, president, Manufacturers Hanover Trust Co., New York, and W. Thomas Rice, president, Seaboard Coast Line Railroad, Jacksonville, Fla., said they expect rates to come down some, but still to be high.

George W. Mead II, president, Consolidated Papers, Inc., Wisconsin Rapids, Wisc., foresaw little change at all while Ernest L. Molloy, president, R. H. Macy & Co., Inc., New York, looked for a drop of 1 to 1½ per cent.

A. S. Alston, executive vice president, American Telephone & Telegraph Co., New York, said he expects a slight decline.

Elmer F. Hinner, chairman, Hercules Inc., Wilmington, Del., said, "A moderate reduction seems likely, but not a return to levels that prevailed from 1960-1965."

A. S. Boyd, president of Illinois Central Railroad, Chicago, said

D. J. Haughton, board chairman, Lockheed Aircraft Corp., looks for only a "slight decrease" in post-Viet Nam business.



that the prime rate will stay around 8 per cent.

The inflation struggle

Very little enthusiasm for President Nixon's fight against inflation was revealed; the mood of Business America on the level of prices seemed uneasy. Answers to the question, "How goes the fight against inflation?" varied from 305 which said progress was slow, 97 which said no dent has been made in inflation, and 247 which expressed dissatisfaction, to 47 which said the fight was bringing fair results and 65 which expressed satisfaction.

Edward J. Bednarz, president of Pinkerton's, Inc., the New York-based security and investigative agency, said the President's tactics are "not sufficiently effective. Stronger steps must be taken with less thought of politics."

Lee H. Schoenhafen, chairman of the Container Corp. of America,

Chicago, brushed off the fight as "not effective."

A blunt "not good" was E. H. Wasson's answer. Mr. Wasson, chairman of Pacific Telephone & Telegraph Co., San Francisco, explained:

"Too many exorbitant wage contracts. Too much 'buy now' philosophy. Too much capital spending in some segments of our economy."

President L. A. Burcham of F. W. Woolworth Co., which is based in New York, found "little evidence of improvement in sight," but said it "could be a longer-range prospect."

W. F. May, chairman of American Can Co., was disillusioned about the fight, which he said was going "very slowly." He explained further, "When unemployment reaches 5 per cent the Administration will panic and the fight will be lost."

Charles L. Huston Jr., chairman of Lukens Steel Co., of Coatesville, Pa., said that in his business, "hardly any significant slowing of inflation is discernible."

Birny Mason Jr., chairman, Union Carbide Corp., New York, saw the fight as "moderately successful."

Seeing some improvement, though not a great deal, were R. A. Stranahan Jr., president of Champion Spark Plug Co., Toledo, Ohio; R. H. Platt, president, The Magnavox Co., New York; E. F. Curtis, president, Deere & Co., Moline, Ill.; H. A. Shepard, president of TRW, Inc., Cleveland, and Don C. Frisbee, president Pacific Power & Light Co., Portland, Oregon.

Refreshing confidence came from David C. Hawley, manager of commercial research for Inland Steel Co., of Chicago. "The battle has been joined," he said, "and is being waged successfully, but clear signs of victory will not appear for several months."

A shade less enthusiasm was shown by Harold L. Buma, vice president of Wells Fargo Bank, San Francisco, who said the fight has "barely begun

Green Light for a Business Speedup

continued



M. C. Workman, vice president, Benjamin Moore & Co., New York, looks for a business pickup soon.



Prices and labor rates and other expenses will "continue to increase," says Richard H. Rich, chairman, Rich's Inc., Atlanta.



Interest rates will drop in the next two years, says Charles R. Tyson, president, Penn Mutual Life Insurance Co.

—it will be a long road" to victory.

A number of executives said a higher unemployment rate may be necessary before there is a slowdown in inflation.

Brown L. Whatley, president of Arvida Corp., a Miami real estate firm, said governmental monetary policies are beginning to be effective. "However," he added, "inflation will not cease until these policies have resulted in increased unemployment."

Funds home from the war

Considerable thought has been given by executives to places where the money which has been diverted into war spending should go, when it's no longer spent on Viet Nam.

D. J. Haughton, chairman of Lockheed Aircraft Corp., Burbank, Calif., listed three places in answer to a what-to-do-with-the-money question: additional research and development for defense which has been delayed by the Viet Nam war; assistance to cities; training unskilled, hard core unemployed.

C. D. Siverd, president of American Cyanamid Co., Wayne, N. J., put aside his questionnaire form and wrote a note:

"We believe that any money diverted from war spending should be used in part for significant tax reduction and in part for improvement of mass transit, education and housing, and for meeting some of the other urgent social needs of the day. It is essential, however, that the budget be maintained in balance."

Sentiment was overwhelming for the government first to reduce the national debt. Three hundred sixty gave this top priority, compared with 62 who want money diverted to building transit systems, 91 who want lowering of taxes, 105 who want money given to urban problems. Scores of other suggestions were made.

Effects of war slowdown

As the Viet Nam war slows the question naturally comes up, "What will this mean to business—your business?"

Little or no effects were seen by four out of every seven respondents. Some effects were expected at 212 companies while a reduction in business was seen at only 28 companies.

R. S. Ahlbrandt, president of Allegheny Ludlum Steel Corp., of Pittsburgh, said the slowdown in fighting could have a deflationary effect on business as a whole, especially among defense-oriented companies. But he saw no large, over-all effect.

James R. Carter, chairman of Nashua Corp., of Nashua, N. H., said his business won't be affected at all.

The same feeling was expressed by Red Motley, president of Parade Publishing, Inc., of New York.

Executives seeing little or no adversity for their companies as a result of the war slowdown included: C. F. Avila, chairman, Boston Edison, Boston; Richard E. Pille, chairman, Security Mutual Life Insurance Co. of New York, Binghamton, N.Y.; M. C. Workman, vice president of Benjamin Moore & Co., New York; F. Ritter Shumway, chairman, Sybron



Thomas L. Phillips, president, Raytheon Co., sees the fight against inflation beginning to show signs of effectiveness.



Little effect will be felt at the Lukens Steel Co. from slowing down of the Viet Nam war, says Chairman Charles L. Huston Jr.

Corp., Rochester, N. Y.; James B. McCahey Jr., president, Chicago South Shore and South Bend Railroad, Michigan City, Ind., and William F. Knowland, editor and publisher, Oakland Tribune, Oakland, Calif.

Mr. Knowland, a former U.S. Senator, was close to the consensus in answering several questions. He called for reduction in taxes and debt with money diverted from the Viet Nam war, and said that the fight against inflation is making only slow progress, that interest rates will soon turn downward and that up to nine months will pass before the present business slowdown ends.

Among executives expecting early improvements in their own businesses as the Viet Nam war slows were: T. J. Barlow, president, Anderson Clayton of Houston; John T. Acree III, president, Lincoln Income Life Insurance Co., Louisville, Ky.; Robert P. Gerholz, president, Gerholz Community Homes, Inc., Flint, Mich.; E. C. Baldwin, president, Sherwin Wil-

liams, the Cleveland paint company.

Del Roskam, president of Cessna Aircraft Co., of Wichita, Kans., straddled the issue. "Our government business will decline," he wrote. But he saw "little change in commercial business as a result of Viet Nam."

Wilmot F. Wheeler, chairman of American Chain & Cable Co., foresaw "less trouble" in some cities where his company has plants.

Companies such as The Mason and Dixon Lines of Kingsport, Tenn., which perform duties for the government, expected a slowdown in business. E. William King, president of the trucking firm, said he looked for decreases in military tonnage.

The effects of less war in Viet Nam on the insurance industry should be beneficial, according to most insurance executives. Expecting increased business in one degree or another were: J. H. Abrahams, president, Security Benefit Life Insurance Co., Topeka, Kans.; R. I. Nowell, vice president, Equitable Life Assurance Society, New York; Daniel L. Hur-

son, chairman, Acacia Mutual Life Insurance Co., Washington, D. C.; R. L. Braddock, president, General Reinsurance Corp., New York; Victor T. Ehre, president, Utica Mutual Insurance Co., Utica, N. Y.; Francis E. Ferguson, president, Northwestern Mutual Life, Milwaukee; Lewis T. Ellsworth, president, Security Life, Salt Lake City; Robb B. Kelley, president, Employers Mutual Casualty Co., Des Moines; F. M. Hipp, chairman, Liberty Life Insurance Co., Greenville, S. C., and Charles R. Tyson, president, Penn Mutual Life Insurance Co., Philadelphia.

Insurance executives seeing little or no effect from the war's slowdown included T. A. Bradshaw, chairman of Provident Mutual Life Insurance Co., of Philadelphia—who hedged by saying that wouldn't be true if an end to the war triggers a recession—and: Armand C. Stalnaker, president, General American Life Insurance Co., St. Louis; Woodrow J. Van Hoven, president, United States Aviation Underwriters, Inc., New York; T. J.

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Green Light for a Business Speedup

continued

Mims, president, Canal Insurance Co., Greenville, S. C.; R. E. Moulton, president, Auto Owners Insurance Co., Lansing, Mich., and William G. Copeland, president, Continental American Life Insurance Co., Wilmington, Del.

Bankers' views

Bankers are keen ear-to-the-ground men and the great majority looked for better business in 1970 than they had in 1969.

Milton F. Darr Jr., chairman, La Salle National Bank, Chicago, said his business will be better because he "anticipates somewhat less-restrictive monetary policies will result in larger volume."

Alfred Brittain III, president of Bankers Trust Co., New York, did not specify why, but also anticipated increased business over 1969.

Robert R. Brina, senior vice president, Bank of Commerce, New York, said introduction of new services will be a factor.

Carl K. Dellmuth, president, The Fidelity Bank, Philadelphia, predicted "some expansion of business activity and population in this area and a higher average price level than 1969."

John S. Fangboner, chairman, National City Bank of Cleveland, said, "Commercial bank activity reflects the volume of business in the over-all economy. We expect the 1970 economy to surpass 1969 in dollar volume."

Lewis Bond, president, The Ft. Worth National Bank, saw better business stemming from "normal growth plus new services."

R. L. Gordon Jr., president, First & Merchants Bank, Richmond, Va., foresaw a boost from "less stringency in Federal Reserve Board policy."

Willard I. Webb Jr., chairman, The Ohio Citizens Trust Co., Toledo, predicted a modest increase in deposits.

Allen Morgan, chairman, First National Bank, Memphis, anticipated "higher yields on investment bonds and an improvement in the gross income on newer services because of a greater number of customers."

Edwin P. Neilan, chairman, Bank of Delaware, Wilmington, said "demand is basically unchanged" but a more aggressive sales effort will be pressed successfully.

Introduction of a new charge plate

service is expected to help Atlantic National Bank, Jacksonville, Fla., said J. T. Lane, chairman.

Area growth will give Bank of Nevada, Las Vegas, a boost, said Alex K. Sample Jr., chairman.

A business leveling off was anticipated by these three bankers:

E. D. Smith, president, First National Bank, Atlanta, who cited Federal Reserve policy.

Frank A. Gunther, chairman, Security Bank, Washington, D. C., who noted a slowdown in growth of bank deposits.

Harold F. Still Jr., president, Central-Penn National Bank, Philadelphia, who saw "money supply being held at current levels and little growth expected in 1970."

One banker who forecast a decline in his business was Thomas J. Robertson, chairman, First National Bank of South Carolina, Columbia, who said demand for loans should ease.

Profits and costs

There was overwhelming optimism among responding executives regarding their own sales or business volume in 1970. Only 66 expected declining business; 165 looked for leveling off while a massive 555 foresaw more business.

At the same time, 494 expected prices of their own products or services to increase, 168 expected prices to remain the same, and 122 said some prices will go up and some will come down.

The profit picture wasn't quite as rosy, but it was still good, with 398 expecting more profits, 263 seeing the picture remaining about the same, 118 expecting declining profits.

There will be no great increase in company spending for capital improvements, the NATION's BUSINESS survey revealed. Expecting to spend more were 244 executives; expecting to spend less were 216 while 318 expected to spend about the same as in 1969.

Labor costs again will outgrow profits and the national economy, in the opinion of most of the executives.

Looking for a 5 per cent increase in labor costs, including fringe benefits, were 125 executives; 6 per cent, 113; 7 per cent, 116; 8 per cent, 103; 9 per cent, 34; 10 per cent, 109; and 15 per cent, 24.

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George Spatta of Clark Equipment Co.

In quest of quality products and people

George Spatta grins and says it's true. He is "more or less" one of those "old-timers who often ran the business by the seat of the pants."

And his ways of doing things were more, not less, effective. This shrewd son of Swiss immigrants, who has an abiding faith that "anyone" with what it takes can do well in "any business" in this country, pushed an auto parts maker from the \$8 million-a-year sales bracket to \$500 million.

In his 41 active years with Clark Equipment Co. in Buchanan, Mich., he made a lot of decisions but the big one came after World War II when "we had to decide whether we were going to remain a parts supplier to the automotive industry—with just three customers—or spread out."

Says Mr. Spatta: "I wanted to sell the whole world."

From a base of heavy-duty power train equipment, Clark pioneered in developing the forklift truck—and changed the warehousing habits of the world. It moved into earth moving machinery and a variety of a related mobile products—truck trailers, cargo vans, containers—as well as refrigeration products.

"We pyramided on what we had," says the powerfully-built Mr. Spatta, who admits that he was a "tough boss" but adds that "I made men rich."

Mr. Spatta, 76, who now lives in a Chicago apartment overlooking Lake Michigan, has served Clark as development engineer, general manager, president, board chairman and—since April, 1968—honorary chairman.

Talking with a NATION'S BUSINESS editor about his life and career, he

candidly admits that to succeed in business you need to take "some smart young fellows, trust them, pay them well, and give them a chance to use their heads."

His "smart young fellows" are carrying on with the sort of drive he's shown, and he's proud of them.

You grew up in the old Hell's Kitchen area of New York City, didn't you?

I was born in Manhattan and I lived in the tenement section, 10th Ave. and 34th St. Later we moved to Yonkers. My people were from Switzerland and my father was a music teacher. I took up machinery, the only black sheep in the family.

How did you go to work for Clark Equipment Co.?

When I finished Cooper Union In-

Lessons of Leadership: George Spatta *continued*

stitute in New York, I went to Schenectady—with General Electric. You know, that was where every young fellow wanted to go. This was in 1915. I stayed with GE for 12 years. After the World War, GE went into a big expansion program and took over a plant in Baltimore. They sent me there and in due time I became superintendent of it.

There was a young fellow, Eugene B. Clark Jr., who sold twist drills for a little company in Michigan, the Clark Equipment Co.

I bought his stuff and I became personally friendly with him.

One day he telephoned and told me that "the governor"—that was what he called his father—was in town and would like to meet me. Mr. Clark Sr. came to the plant; I showed him around and accepted an invitation to have dinner with him. He said he liked the things he'd seen at the plant, and wanted me to join his company.

He told me he was going to Florida and not to give him my answer until he got back, in three or four weeks. So I did and it was "Yes," I'd come.

Did you have any qualms about leaving a big company like GE?

No. I was full of ambition, full of vinegar. I had learned the trade of machinist as well as becoming a mechanical engineer at Cooper Union. I was a skillful workman; I understood mathematics and machine design. I felt the world was mine and Clark Equipment was the place for me.

Also, there was a big difference: The president of the corporation was hiring me. At GE, some personnel clerk hired me.

It makes a difference, then, who hires you?

Yes, always.

Wasn't Clark's first big expansion program, after you became its head, into earth moving equipment?

Not exactly. This is kind of a complicated story and involves World War II.

While Mr. Clark Sr. was still alive, we had developed a material-handling forklift truck and, as late as Pearl Harbor this was just a very small part of the business.

Now this is a very important historic fact. The United States Army really sold this country and the world on how to package goods. And how to unload and load them. They promoted the use of this forklift truck like it had never been promoted before. Because we made the axles, the drives and things, we had the inside track on getting this business.

We got so busy for the Army, making thousands and thousands of these trucks, that when the war ended we thought we'd have a heck of a time—nobody would want them any more. But this idea had spread all over the world, handling things with lift trucks and using the cube of the building rather than the floor space alone.

I took a smart young fellow, Walter Schirmer—he's president of the company now—and put him in charge of establishing dealers. And today we're all over the world making the lift trucks.

This was really the first big expansion move. The road machinery came later.

Wasn't this pretty risky, going into earth moving equipment against the established giants?

Well, you come up against a sort of philosophy here. Everything is a risk.

Did you really hold races between your earth moving machines and the competitors'?

Sure, sure. I wanted to show the quality of our product.

You were once quoted as saying that if you wanted talent you would go out and hire it.

Yes, sir. Remember, when I took on the job of general manager, not yet president, the company was doing \$15 million a year. If I was going to work all over the world and do this and that, I had to find some smart people.

Is this still a good practice today—going out and hiring talent?

Yes, although you've got to remember that as your company grows, your internal sources of manpower are so great that you can usually find anything you want.

You've said anyone can bull his way into any business. What did you mean?

This is a very big country, a very great country. Look at what has happened between 1939—I pick that as a kind of world date; Hitler was wrecking Europe and World War II started—and 1969, which is another world date because we were going to the moon. The gross national product has gone up seven or eight times. Now nobody is so efficient and so good in any business that someone else can't go into it. You just have to bull it through.

You know, I only regret we never got into the electrical business. That's where I came from. The things we did get into all concerned themselves with our automotive driving units as a base.

I didn't invent those things. They were here.

You pyramided on them?

I pyramided on them and I used them for many other products.

But if you hadn't been so busy in your own specialty field you wouldn't have hesitated about going into a new one?

Not a bit. I would have taken two or three smart fellows away from where they were, brought them here, locked them up and let them go to work. In a year's time, they would have come up with something.

Your company has always stressed quality and you once said you were proud of your above-average price.

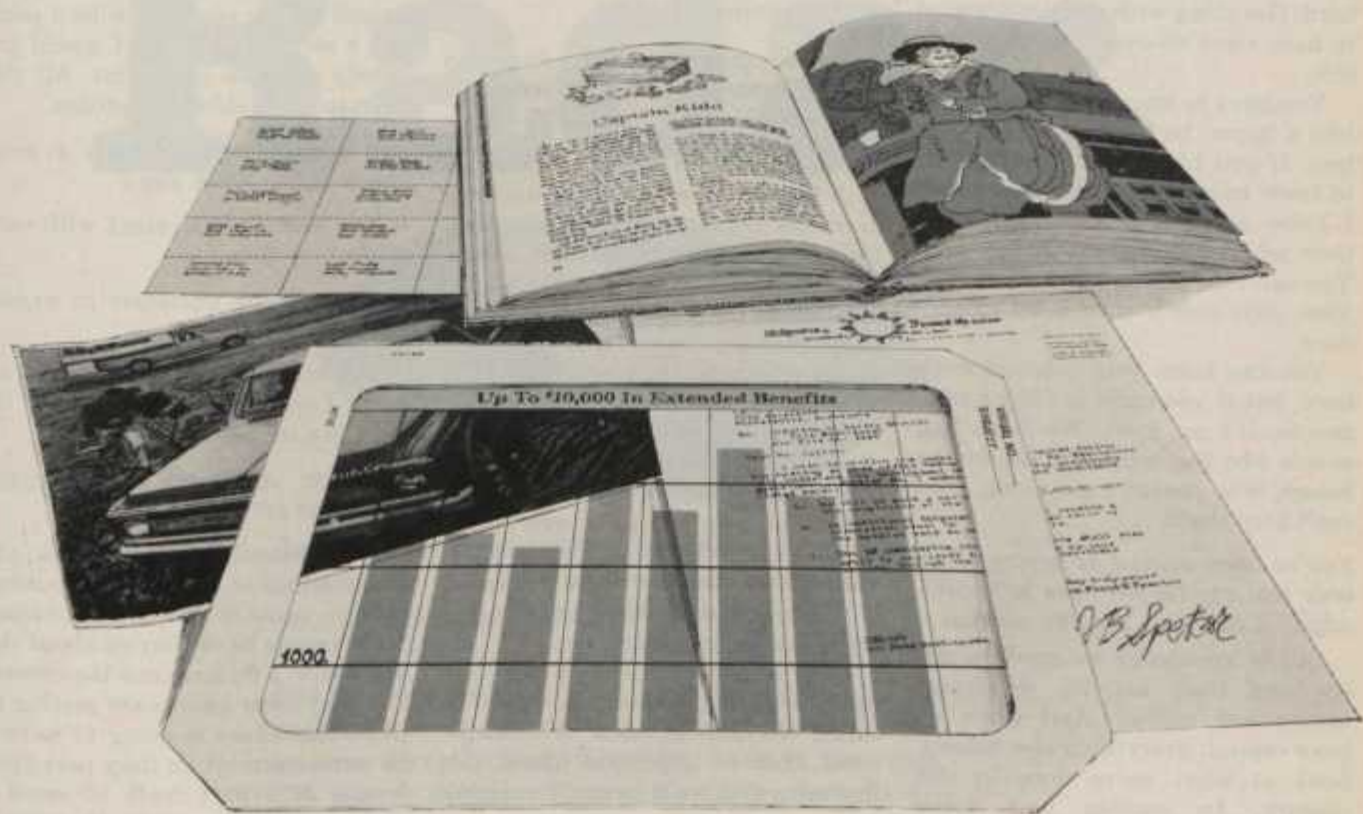
Sure, because quality still sells, especially in capital goods. That's what we're in. If your trailer runs longer, or our lift truck lifts faster, is better and more stable, its quality will sell it.

You believe your customers will stay with you if you build a quality product?

And pay for the extra increment. When the government writes specifications, you have to be lowest bidder. That is the way they do it. A quality product can't be bid too low. A lot of government people will not accept this and you lay yourself open to a lot of argument.

As a chief executive, would you say

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Lessons of Leadership: George Spatta *continued*

quality in people, as well as in products, is essential?

Absolutely.

What do you look for in an executive?

Well, certainly the ability to think clearly. And then there are three important things. Know your job. Work hard. Get along with people. We used to have signs all over the shops with this.

You have to know your job. If you hire a buyer, he has to know how to buy. If you hire a salesman, he has to know how to sell. And work hard. I know a lot of fellows who know their job, but they want to play golf. You can't do this at Clark. We make these guys rich if they want to produce.

You can know your job and work hard, but if you can't get along with people, it's no good. We have had people who just were difficult human beings, who couldn't get along. You can't keep them.

You've been quoted as saying, "The only real capital we have is knowledge." Could you amplify on that?

Out of knowledge we create activity, and from activity we create money and capital. And when we have capital, everything else follows. Look at what we've done in this country. In another half dozen years it will be 200 years old. In that period we've developed it—roads, highways, 50 to 60 million homes, and all of this fantastic wealth—because we knew how to do it.

India has the resources, but somehow it doesn't have the knowledge or the will to transform these resources into the good life that we have.

The trouble is we have gone so far now that we are generating a class of these untouchables who think the good life is no more. They want to grow hair.

What about education today?

I think it is pretty bad. I've been invited to do a little talking at a university. Maybe they'll throw me out. But these universities don't teach our kids how our capitalistic system works.

We are a nation of employees. We all work for somebody. Seventy-five or 80 million of us. Yet nobody tells our kids how our system works, the

means by which we make our living. Take the 500 top corporations. They have several hundred billion in capital, they hire 15 million people, and they only make a nickel on the dollar. Just think, some of these stupid kids want to destroy this Establishment. I'm going to tell them this, but I'm afraid they may laugh me right out of the building.

You once spoke about the forgotten man of American industry. What did you mean?

The foreman. You see, we start out with the worker who may or may not know his job very well. We hire him, train him and he is the base of the whole business. Now who deals with him? Not the president of the company. Not the chairman of the board or the directors. Only one man deals with the working stiff, and that is the foreman. And we pay very little attention, for the most part, in American industry to training the foreman.

The foreman has to be everything to his men—diplomat, peacemaker, everything. And we have neglected him in pay and generally in the quality of his development.

Maybe instead of calling the foreman middle management he should be called the first echelon of management. He's an important fellow, this foreman, and we'd better remember it.

By and large it is factory workers, proud of their craft and willing to work at it, who have brought prosperity to this country. We've got to reverse this downgrading of factory work and raise the status of the foreman if we are to attract young people with talent and energy and the capacity to become middle managers.

As an executive, you were said to dislike staff meetings.

Let me put it this way. A lot of old-timers ran their businesses by the seat of their pants. I belong to that gang, more or less. My officials were fully in my confidence. We met often enough, but I didn't want to butt into a man's activity if he was running it. That would have diminished his authority with his people. When Alfred Sloan, at General Motors, picked a guy to run Chevrolet, he didn't bother about how he ran his staff. He made that one man rich.

I've wanted to make my people rich, too.

Is it possible to run a company by the seat of the pants today?

Probably not. Things have gotten much more complex. You have all of these computers today. We're raising a generation of computer managers. I figured all my stuff out with a pencil and a scratch pad. But I would graciously yield on this point. All they have to do is show big profits.

You're said to have been a pretty tough boss. Were you?

Yes. But if a man stuck with me, I made him rich.

You made the decisions to expand Clark?

Yes, except that during the last five years I worked very closely on this with Walter Schirmer.

What do you think is the biggest challenge for industry today?

Well, broadly, I don't think anyone ever has to worry about business in this country being nationalized. Some people have worried about this, you know. I do have one big concern. It's that labor unions are getting too powerful. There is going to have to be some restraint on their part about wages. If a part costs 10 cents to make and labor wants 15 cents to make it, prices are going to have to go up. It's a never-ending thing.

Sure, I know the guy on the line will say, "But my last raise is used up." Of course, every raise will be used up. But you have to keep some profitability for your stockholders if you're going to stay in business.

You hold 37 patents in your own name. Had you always wanted to be a mechanical engineer?

Yes. I had two loves of my life—to be around machinery and to build houses. If I hadn't been able to make a good living in machinery, I think I would have built houses. It's creative work; you make things.

Did you ever satisfy that urge to build houses?

Oh, yes, but just on a small scale. I built several in Florida, one in California and a couple in Baltimore. You know, that's one reason I didn't

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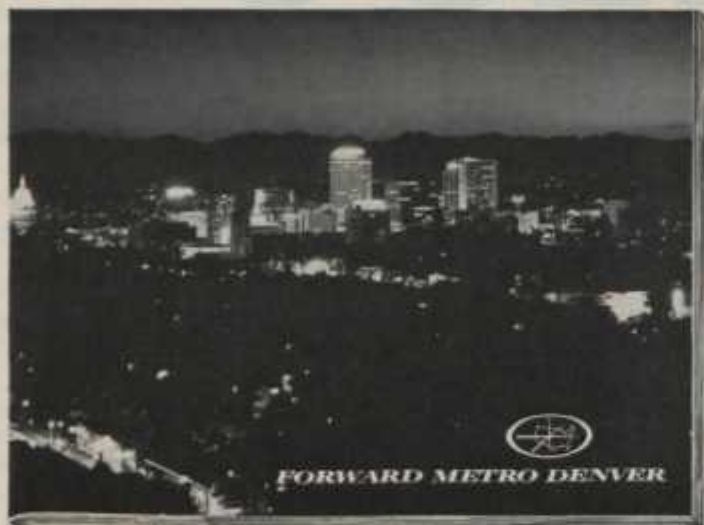
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George Spatta *continued*

hesitate on expansion into road machinery. I felt that after the war the world was going to need highways and dams and the whole face of the earth was going to be changed.

None of your sons joined you in the company.

No, they are all on their own. They made it on their own. I was glad of this. You didn't have any of this, "See that kid, if it weren't for his father..."

Are opportunities as great for a young man starting out today?

Oh, sure. More opportunities. Well, because of these mergers, there may not be as many vice presidents and presidents, but there's a lot of opportunity for a fellow to earn a lot of money.

My people were Swiss immigrants. In the old country, we couldn't make it. This is a wonderful country. The job on the top is open to the lowliest guy if he has the goods.

You know, in this country, the capitalistic system belongs to everybody. Every little widow with a few dollars can go into a big business. Our 20,000 workmen could own the Clark Equipment Co. if they would pool together.

What do you think are the proper roles for business and government?

Cooperate 100 per cent both ways. The government shouldn't hold a club over business and business should truly work with government.

What has given you the greatest satisfaction in your business career?

Well, I'll tell you. Mr. Schirmer made a talk to the security analysts in New York last fall and he projected a billion dollars in sales for the company by 1973. And that is my greatest satisfaction, that I trained people so that they are carrying on with the same kind of push that I instilled in them. **END**

REPRINTS of "Lessons of Leadership: Part LVI—George Spatta of Clark Equipment Co." may be obtained from *Nation's Business*, 1615 H St. N. W., Washington, D. C. 20006. Price: 1 to 49 copies, 35 cents each; 50 to 99, 30 cents each; 100 to 999, 17 cents each; 1,000 or more, 14 cents each. Please enclose remittance with order.

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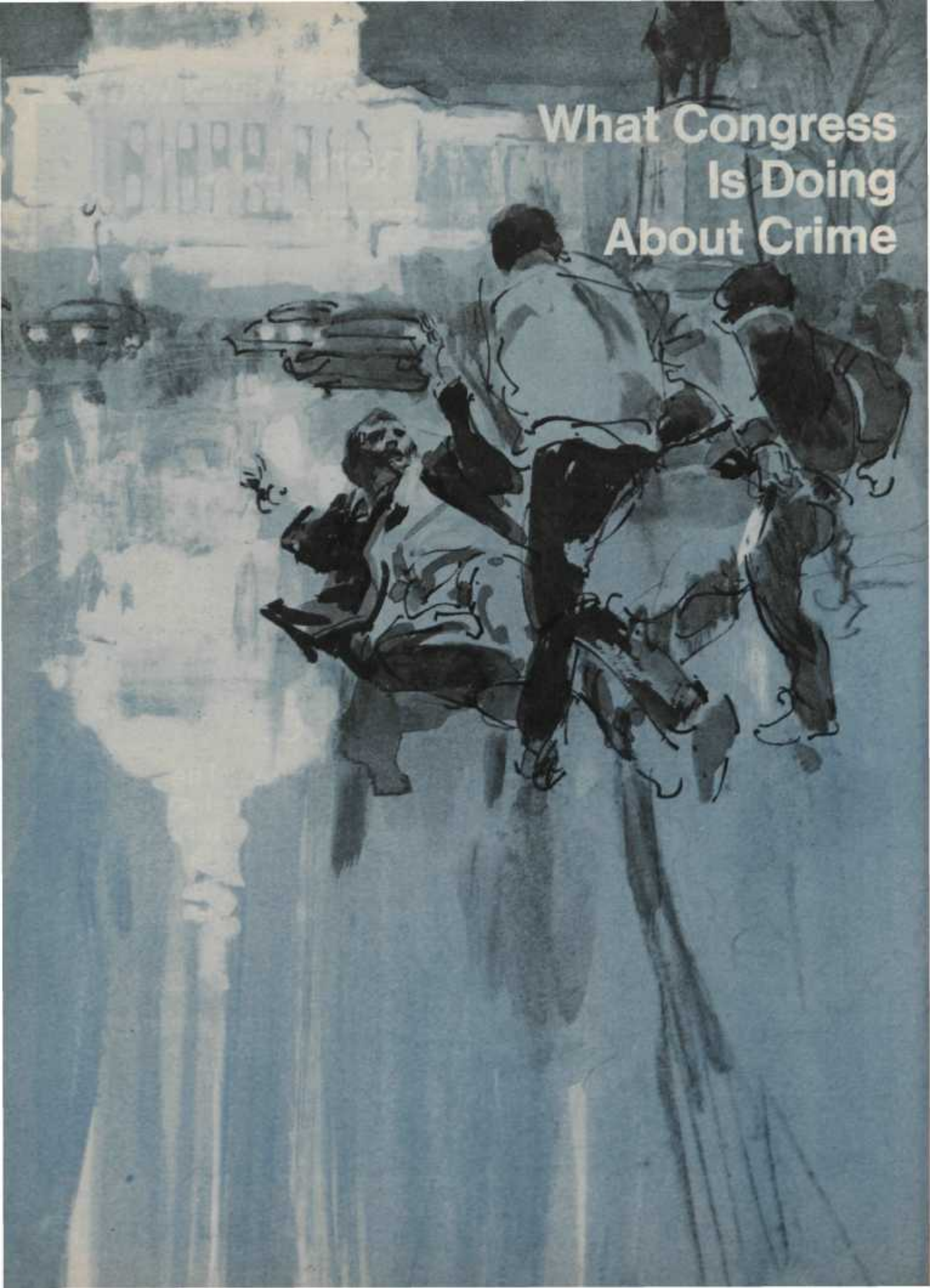


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What Congress Is Doing About Crime



Though there's a murder every 33 hours in the city where it works, this Congress hasn't managed to do much more than talk about big-time and small-time criminals; but now it appears to be ready to move

Gunfire roars often in that part of town. Most people go armed, get off the streets before dark and keep doors and windows locked.

With a gun constantly on his hip, Jim Swann figured he could defend the place where he worked. But he wasn't quite fast enough when he drew on two holdup men. They shot first. Dying, Mr. Swann killed one and badly wounded the other.

Homer Maddox was a stranger in town when, in a tavern, he accused a man of having held him up earlier in the evening. The man ran out. Later, as Mr. Maddox and two friends sat drinking, the man he had accused and a companion suddenly loomed over the booth and opened fire with shotguns. Mr. Maddox and one of his friends, both wounded, drew their own guns and returned the fire, routing their assailants. Two bystanders were injured in the shootout.

A brawling, lawless frontier town of a century ago? Chicago in the 1920's?

Not at all.

These and many other violent incidents like them took place in the capital of the United States, in the year 1969.

Practically every other American city is experiencing a rising crime rate, but that in the District of Columbia is soaring far faster than the national average.

It is among the many problems confronting Congress as it continues to grapple with the seemingly endless issue of crime and its many ramifications. Techniques being proposed for Washington have national significance because they might well serve as a model for other cities.

There's a long list of pending bills aimed at making the nation safer from the criminal, speeding the work of criminal courts and improving cor-

rectional systems that too often are only breeding grounds for further lawlessness by released inmates.

The legislation covers three general areas: fighting organized crime, expanding a new federal program to help states and localities improve law enforcement, and cutting down the skyrocketing crime rate in the District of Columbia.

Words and inaction

Some of the proposals have been the subject of a tug-of-war between the White House and Capitol Hill, with each blaming the other for delay. Others were sidetracked while Congress thrashed out such issues as tax reform and defense-spending policies. Still others, involving complex constitutional issues, have been treated cautiously by Congressional committees.

In any event, the first session of the Ninety-first Congress has slipped by without final action on any major crime proposals.

Anticrime legislation has never had an easy road on Capitol Hill.

It's been nearly 20 years since the famed Kefauver hearings spotlighted the extent of organized crime in the nation and many people first heard what has become a chillingly familiar term—"the Mafia."

There have been laws and proposed laws, announcements of all-out attacks and talk of crisis.

But organized crime has continued to spread. Illegal gambling, infiltration of legitimate businesses, the narcotics traffic, loan shark rackets and other activities have expanded.

Decisions Congress must make involving street crime—the holdup man on a dark sidewalk, the intruder in the night, the lurking rapist—include how much money to give the

Law Enforcement Assistance Administration and how some of that money can best be spent. LEAA was established in 1968 to help improve state and local police departments, courts and correctional institutions.

There's been some disagreement between that agency and Congress over priorities for the money allocated and they might reach a showdown in the new session beginning this month.

Close to home

Street crime is a first-hand problem for Congress in its role as the legislative body for the District of Columbia.

President Nixon views it as a national problem: "The nation's capital, the first city in the world, should really be an example to the nation and to the world of a safe city. . . . We cannot point our finger to the other cities or the national crime statistics unless we do something about crime here where we are, and where we have the responsibility."

There's a murder every 33 hours in this city dedicated to advancing a civilized society under law. There's a rape every 29 hours, an aggravated assault every 2½ hours, a robbery every 50 minutes, a burglary every 25 minutes.

To Congress, it's not just a matter of statistics, either. In the past year, a Senator's pretty young secretary was murdered by an intruder in her apartment. A late-working Representative fought off a would-be holdup man in his office.

A group of members of Congress, leaving an exclusive club, heard gunfire and found a young man lying on the sidewalk nearby; he'd been shot by a holdup man.

Big, burly Sen. Len B. Jordan (R.-Idaho) was slugged with a blackjack in his Capitol Hill apartment building

What Congress Is Doing About Crime *continued*



when he refused to turn his money over to a man who had forced him off an elevator. He wrestled his attacker to the floor and the man fled when the noise of the fight attracted other residents. (The 70-year-old Senator, incidentally, was on his way to speak at a Congressional prayer breakfast on the subject, "The Good Samaritan.")

The list goes on. "Everybody here knows somebody who's been held up or mugged or burglarized," says Washington Police Chief Jerry V. Wilson.

"By searching for new ways of applying the resources of the federal government in the war against crime here," President Nixon says, "we may discover new ways of advancing the war against crime elsewhere."

The President asked immediate action on lawlessness in the capital, and attached the same sense of urgency to proposals he made for battling the big-time mobsters.

"I must warn our citizens that the threat of organized crime cannot be ignored or tolerated any longer," he said in a message to Congress.

Chances are good

And, despite the delays of 1969, Capitol Hill observers say prospects are good for passage this year of at least some of the legislation that's long been needed to fight organized crime.

They also predict Congress will continue to be increasingly generous with the Law Enforcement Assistance Administration, giving it a third-year budget that will be more than 10 times bigger than its initial appropriation of \$63 million.

The pending organized-crime bills—some sought by President Nixon, others introduced by individual members of Congress—are designed to strike at two of the basic operations that have enabled mobsters to become more entrenched each year.

Some, hopefully, would cut off the vast flow of money, estimated at up to \$50 billion a year, from illegal gambling operations. Others would prohibit investment of illegally gained money in legitimate enterprises.

In another vital area, a series of measures would help end the long-time practice under which potential witnesses have been terrorized, through threats to their lives or their families', into silence.

Congress is expected to approve specific measures to:

- Give the Justice Department authority, in the President's words, to "enter any community and shut down illegal gambling operations."
- Prevent racketeers from using illegally obtained money to invest in or take over legitimate businesses operating interstate and allow use of such antitrust weapons as forfeiture of financial interest in case of violations.
- Make it a federal crime for local law enforcement officials to protect gambling operations.
- Elicit more testimony from arrested racketeers by providing for immunity from prosecution—thereby making the Fifth Amendment plea against self-incrimination inapplicable—where the information would do more to hurt organized crime than would prosecution of the individual.
- Allow for use in evidence of written statements from persons who might otherwise refuse to give information for fear of their lives.
- Provide for stiffer-than-usual sentences—up to 30 years in prison—in cases of continuing felonious activity, a proposal aimed at leaders of organized crime and other professional lawbreakers.

Law enforcement officials consider

as vital the provisions for hitting at the mobsters' income and for obtaining evidence against higher-ups.

"Organized crime would shrivel up without its enormous gambling resources," the President said.

An old, old story

If the pending bills do in fact prove the beginning of the end for the big-time crooks in this country, they've been a long time in coming.

After a two-year investigation, a Presidential commission commented in 1967: "The extraordinary thing about organized crime is that America has tolerated it for so long."

Street crime, which is so depressingly familiar to more and more Americans, is viewed also as a problem that did not necessarily have to grow to its present awesome dimensions.

But, those now trying to cope with it point out, public and governmental apathy led to undermanned and underpaid police departments, court congestion that permits many defendants indicted in violent crimes to roam the streets for months while awaiting trial, and crowded prisons that breed more crime.

"We don't really rehabilitate criminals in the present system," says Chief Wilson. "They just grow too old, or a wife tired of having her husband in jail all the time makes him quit crime."

Working in all three areas of police, courts and correction, the Law Enforcement Assistance Administration is off to a promising start in the opinion of professional observers. Operating at a speed believed impossible by some Congressmen, all 50 states established planning commissions to put federal aid to work to prevent crime, to speed criminal justice and to find ways of restoring criminals to useful lives.

The ante for raises

But there is disagreement in Congress over some aspects of the LEAA operations. Some members are pressing for changes in the 1968 law that established LEAA, so that money would be funneled directly to the cities, rather than through states.

Other Congressmen think localities

should have greater latitude in determining how much of the federal money can be used to raise police salaries and thus attract more and better men to the front lines of the war on crime. They say the crime problem is so grave that lower priorities should be given to such long-range projects as financing college education for potential police leaders, including administrative and managerial personnel as well as law officers.

No more than a third of a grant may be used for policemen's pay, and then only on a matching basis with local appropriations to raise salaries.

The extent of the disagreement on whether funds should be used to train administrators and managerial personnel was shown when the House appropriations subcommittee on the Justice Department budget reported:

"Emphasis should be placed on short-term educational programs to increase the quality of law enforcing personnel, especially police officers, rather than financing full-time, non-law enforcement personnel leading to a degree."

Attorney General John Mitchell differs: "Not only do you have to train the policeman on the street, but you also have to change the management techniques of the police department."

On the Senate side of the Capitol, Sen. Clifford P. Case (R.-N.J.) views the issue this way: "I am not opposed to education and this and that and the other thing, but it's seemed to me for a long time that the real problem was not enough men . . . to patrol the streets, not enough men to investigate crime and not enough men in the courts as well, not only the judges but also attendants and clerical help."

He adds: "Maybe we are playing around with the fringes of things until we get at that in a big way." But Mr. Mitchell questions whether the federal government would ever be willing to spend enough money to subsidize the salaries paid by the 44,000 different police agencies in the country.

The prospect is the LEAA budget for 1970-71 will be close to \$700 million compared with less than \$300 million this year, and allocation of funds will follow present lines.

(While the dispute over education



and managerial training goes on at the top level, a working policeman has his own view of the qualifications needed for success in law enforcement. Says Sgt. William Woods, a 14-year veteran of the Washington police: "You have to have the patience of Job, the wisdom of Solomon and the ability to shoot like Wyatt Earp. You have to be a special kind of guy."

Tribulations about trials

Improvement of court systems, rehabilitation of narcotics addicts and far more attention to rehabilitation of convicts to keep them from returning to crime are also coming to the forefront in the war against lawlessness.

While Congress acts only for the federal courts and prisons, the hope is that progress in them will stimulate states and localities to act.

Chief Wilson of the Washington police is particularly anxious to see courts reorganized, with more efficient management.

He sees delays in trials as a major factor in the rising crime rate. (An unemployed Washington truck driver was free on \$500 bail on a murder charge when indicted in a second slaying; he failed to answer a mailed order to appear for arraignment and was returned to police custody only when arrested on a third homicide charge. It all happened over a six-month period.)

Chief Wilson says the courts are unable to tell his department how many accused defendants are free awaiting trial. He sees most courts as "poorly managed, poorly organized and poorly administered."

But suggestions, including one from Mr. Nixon, to authorize "preventive detention" of accused persons considered dangerous to society, have run into formidable opposition on constitutional grounds. Under the proposal, a defendant charged with a serious crime could be jailed to await trial if a judge ruled he might endanger society if freed on bail.

Sen. Sam J. Ervin (D.-N.C.), chairman of the Senate Judiciary subcommittee on constitutional rights, argues preventive detention clashes with the traditional assumption that a defendant is innocent unless proven guilty.

Preventive detention will be debated long and hard in the new session of Congress and backers are hopeful for success. A proposal to levy stiff, additional sentences for use of a firearm in a crime also has wide support.

So, despite the past year's delays, Congress remains very much aware of the crime problem and is moving into areas long talked about but never fully developed in earlier efforts to halt the spread of lawlessness.

The 1967 crime commission pointed out the route: "Law enforcement's way of fighting organized crime has been primitive compared to organized crime's way of operating. Law enforcement must use methods at least as efficient as organized crimes."

Sen. John L. McClellan (D.-Ark.), chairman of the Senate Judiciary subcommittee on criminal laws, dramatizes that point by telling how, for many years, gambling syndicates recorded information on "rice paper," which ignited when touched with a cigaret or dissolved when placed in water, thus providing instant disposal when law officers appeared suddenly. He adds:

"The U.S. Navy is only now placing some of its classified documents on paper of this type. . . . It is surely an ironic commentary on our national government that the forces of organized crime could be considered either technologically more advanced or more innovative."

END

James W. Ford
Director, Economics Office
Ford Motor Co.

THIS MONTH'S GUEST ECONOMIST



REWARDS FROM THE KENNEDY ROUND

In June, 1967, after three years of negotiations, the Kennedy Round of tariff bargaining wound up, with some 40 countries agreeing to reduce tariffs. For the first time since the General Agreement on Tariffs and Trade came into effect in 1948, negotiations were aimed at across-the-board reductions by each nation, with a minimum of exceptions.

The Kennedy Round achieved a substantial lowering of barriers to trade in industrial products. Major countries reduced tariffs on many consumer items—including automobiles, electric appliances and textile goods—on industrial machinery, and on such basic materials as steel, aluminum, paper and lumber products.

In all, duty reductions affected about \$40 billion in world trade. Tariffs on many products were cut by 50 per cent, and over-all, the average reduction was about 35 per cent.

Negotiating nations also agreed to "antidumping" practices—that is, penalizing imports for sale at prices below the equivalent levels in the home market of the manufacturer or in third markets.

Another feature was a conditional agreement by major European countries to make additional cuts in chemical tariffs—and an agreement by Belgium, France and Italy to modify discriminatory road taxes on U. S. cars—if the U. S. would eliminate the "American Selling Price" base for tariffs on certain chemical imports. Most tariffs are applied to the price of the imported item, but under the ASP system, the base for duty is the generally higher price at

which the like American-made product is selling.

The major disappointment was the failure to achieve meaningful reductions in tariffs and other barriers to international trade in agricultural products. Tariff cuts agreed to in the Kennedy Round are now coming into effect in stages over a four-year period that began in 1968. How will they affect U. S. business?

First, import competition will increase as prices of many industrial imports are reduced and sales rise. Correspondingly, U. S. industrial exports will be stimulated by reductions in the selling price abroad. In many cases, inflation will keep prices from falling, but they will rise less than they would have risen.

In addition, all U. S. businesses will benefit indirectly. Tariff reduction, by intensifying competitive pressures, will lead to more efficient use of labor and other resources, with consequent expansion in output, income and the total market for goods and services.

The more trade barriers are reduced, the larger the general benefit.

This last observation leads to the most fundamental implication of the Kennedy Round for U. S. business—it is a major step toward freer international exchange.

Potential gains can be realized by:

- Further reductions in industrial tariffs.

- Gradual reduction in major barriers to agricultural trade—tariffs, agricultural price-support policies, and international commodity agreements that fix minimum prices and establish export quotas.

- Easing of such quasi-tariff barriers to trade as unnecessary customs red tape, discriminatory taxation and export subsidies.
- Elimination of quota limitations on the volume of imports.

Freer trade in agriculture and in simpler industrial goods will help less-developed countries by opening new markets for their products. An important step by industrial countries would be to recast tariff structures that now discourage the processing of raw materials in the countries from which the materials come. In some industrial countries, imports of a raw material bear no, or very low tariffs, but imports of semiprocessed products made from the raw material are subject to duty on their total value, including that of the raw material.

This inhibits a form of economic development that would be especially suitable for some producer countries.

Tariff reduction that makes better markets for less-developed countries will reduce a portion of the economic pressure that has been a cause of nationalistic economic policy in some of them. And it will lead, in return, to expanded mass markets for many U. S. goods.

Though the Kennedy Round, if followed by further steps to free the world economy, may prove to have opened a major opportunity for U. S. business, the persistence of international monetary crises threatens to wipe out some of the gains achieved so far.

In 1968, both Britain and France restricted imports because of the weakness of their currencies—a reminder that progress toward freer trade will be slow in a world of currency instability. Our own balance of payments problems have led to restrictions on U. S. investment abroad and to widespread uneasiness about continuation of our liberal trade policies.

The means must be found to prevent foreign exchange crises. Of course, the costly adjustments required of some businesses and groups as a result of the Kennedy Round are not welcome, and it is proper that the 1962 Trade Expansion Act provided for government assistance in such cases. It is clear, however, that the alternative to negotiated reduction of trade barriers is retrogression to more and more restrictions on international trade and investment.

GREAT MOMENTS AND GREAT MEN OF AMERICAN BUSINESS

BY STERLING G. SLAPPEY

Associate Editor

Gustavus F. Swift was a cattle buyer from the East who went west nearly 100 years ago determined to do better for himself.

He succeeded because he snatched up the idea of using the refrigerated railway car—a bold innovation in those days—to ship chilled meat from Chicago, where all the cattle were, back to the East, where most of the people were.

He was the making of Swift & Co.

Michael J. Owens, son of an Irish immigrant, was a labor leader, a rough man, fearsome and resolute. Wild Mike finally became tame and turned to making glass instead of making trouble. He didn't know much about scientific theory, but, by golly, he came up with a device that transformed glass-making from a handicraft into an industry.

He was the making of Owens-Illinois, Inc.

Alexander Graham Bell produced the telephone, certainly, but it took Theodore N. Vail to make a business out of his invention.

He was the making of AT&T.

These are three of the giants of business who appear in their color, their vim and verve, in the articles which follow.

In corporate life, just as in human life, there always have been a few moments, a few particularly brilliant insights or decisions, on which the future swung. Circumstances often have helped to dictate which way a company should turn. Transcendent characters have dictated other turns. Sometimes it has been an entirely new process or item which shrewd men or sensitive boards of directors recognized as revolutionary and which they seized upon before another company got there first.

Authors of these articles are among the biggest names in business and each knows his subject well. Usually, the man NATION'S BUSINESS asked to write about a company was an executive of that company.

Besides Messrs. Vail, Owens and Swift, some of those whose stories are told are:

John Butler Tytus of Armco; George Eastman of Eastman Kodak; the Du Pont triumvirate of research

and development which produced nylon—Lammot Du Pont, Dr. Charles M. A. Stine and Dr. Wallace H. Carothers; Clarence Saunders, who popularized self-service shopping with his Piggly Wiggly grocery stores which in turn provided National Cash Register with its opportunity to leap ahead; J. Spencer Love of Burlington Industries and the early days of rayon; Daniel Cowan Jackling, who dug the "richest hole on earth" and got enough copper from it to make Kennecott great; Felix Norman Mansager, who turned The Hoover Co. from door-to-door selling into a giant which manufactures in 12 countries and sells in 100; Henning W. Prentis Jr. of Armstrong Cork Co., who made not one decision, but a series, stamping him as a marketing genius.

The decision to stop using exclusively what had been called "the most perfectly designed commercial package in history" and to put Coca-Cola into containers of a half dozen different sizes and shapes, lifted The Coca-Cola Co. to new heights.

A legal action shaped the future for Pitney-Bowes.

General Foods decided to diversify at a time when most people didn't know what the word meant.

Ford Motor Co. looks back with fondness on a cluster of decisions—to produce the Model T, to get into mass production and to pay workers a minimum of \$5 a day. And, in the Ford article, which was authored by historian Allan Nevins, there's a description of how Edsel Ford got a piece of a finger cut off on a new machine.

From adversity came greatness for 3M. Back in the company's past a case of olive oil in transatlantic shipment overturned into abrasive material to be used in manufacturing 3M sandpaper. Later, abrasive began falling off sandpaper, customers began screaming and the company faced disaster. Finally, the culprit—that olive oil—was found and the company was saved.

There is no attempt here to record every one of the countless, fascinating stories behind the familiar names of American business. This series tells of the men, the moments and the decisions of only a cross-section of the fabulous U.S. business scene. You can read about them on pages 48 to 109.

Making a Business Out of Mr. Bell's Invention



By
Charles E. Wampler
*Vice President and Secretary
American Telephone &
Telegraph Co.*

On a clear spring day in 1907, a phalanx of AT&T directors trudged across the Vermont farmyard of Theodore N. Vail, and found him overseeing construction of a new barn.

They had come to urge him to become president of the company again.

"Your work is not done," they said. "Come back and complete the system you planned."

The background was this: AT&T, although it had more than two and one half million phones, was in a difficult financial position. With the expiration of Alexander Graham Bell's original telephone patent in 1893, hundreds of other independent telephone companies had sprung up overnight. Connection between them seemed impossible. The company was hindered by inadequate technology in meeting public demand, low employee morale and an accident rate so high that insurance policies were given only at premium rates.

Problems were many and complex.

AT&T turned again to Mr. Vail, the man who had spurred the early growth of the telephone company, but had resigned as president in 1887 due to ill health and a feeling that the company should put a larger share of earnings back into the business.

Mr. Vail, who had rejected a similar request in 1901, at first declined this new invitation, but then reconsidered.

To his sister he confided, "I must take it. It is the crowning thing in my life. I refused it six years ago; I am in a position to take it now. Besides, they need me."

On May 1, 1907, his election as president of the American Telephone & Telegraph Co. was announced.

It has been said that Alexander Graham Bell created the telephone and Theodore Vail created the telephone business.

The economist Peter Drucker once wrote that "AT&T is prospering . . . largely on five great basic decisions

that Theodore Vail made." These decisions, Mr. Drucker said, were:

- Acceptance of the need for utility regulation.
- The concept that the function of business is service.
- An idea that the telephone system should be integrated on a national and world-wide basis.
- That the Bell System must generate its own research and technology.
- That the business must attract the small investor.

Alexander Graham Bell said that Mr. Vail "accomplished the dream of my youth of the wires that should cover this land."

And Thomas Alva Edison once said of Mr. Vail, "Until his day the telephone was in the hands of men of little business capacity."

The decisions he made between 1907 and 1919 have become the cornerstone on which the company of today has been built.

Realizing the road to recovery



A moment crucial to the success of AT&T came in 1907 when Theodore N. Vail returned as president after 20 years of retirement to put the ailing company on a sounder footing. Mr. Vail has been described as the creator of the telephone business, and basic decisions he made still help the Bell System to prosper.

involved the expansion of the system, Mr. Vail began consolidating telephone operations. Within a year the number of telephones linked to Bell exchanges rose from 450,000 to 700,000.

Money for a bond issue was in short supply, but Mr. Vail was determined to push expansion of the telephone system.

At a time when telephone stock was declining, he announced a new stock issue. To the amazement of his associates, the issue raised more than \$20 million in cash and restored AT&T to financial stability.

Mr. Vail also reorganized Western Electric, which had become a vast, semiorganized, sprawling collection of plants, into three efficient groups.

Employee morale strengthened as benefit and pension plans were introduced, safety practices were launched to prevent accidents and the attitude of the public became warmer.

Mr. Vail insisted upon modernization of the telephonic art and established an experimental and engineering department to determine "the value and efficiency of anything that is new." This new department was the genesis of what is now one of the

world's largest and finest research and development organizations, Bell Telephone Laboratories.

Mr. Vail pushed the completion of the transcontinental telephone line in 1915 when most people thought it an impossible task.

The Bell System flourished under his leadership. By 1919, when he retired—then holding the post of chairman of the board—11 million Bell telephones were in operation, long-distance calling from New York to California was in effect and overseas calling to Europe was imminent.

END

The Spare Hand Who Went Beyond the Dream of Leonardo da Vinci



By
B. C. Huselton
Vice President
Armco Steel Corp.

As a boy, John Butler Tytus had watched with fascination the never-ending ribbon of paper produced at his grandfather's mill in Middletown, Ohio.

He worked summers there to help pay college expenses, and upon graduation from Yale in 1897, began working full-time in the shipping department. But his father died, and the family sold the company, so he left to work for a contractor in Dayton.

He followed with interest, however, the founding of a small steel firm, American Rolling Mill Co., in Middletown in 1901. Three years later, he approached founder George M. Verity.

To Mr. Verity's surprise, young Tytus asked for a job on the production end of the business, which at that time consisted of a 25-ton open hearth furnace, four hand-operated sheet mills and a galvanizing pot. He was sent to Charles R. Hook, plant superintendent, and was soon at work on one of the hottest (temperatures up to 150 degrees) and hardest jobs at the mill—that of spare hand.

As a spare hand, young Tytus earned \$3 during a 12-hour turn dragging hot steel sheets from the rolling mill to the shear.

Later, he recalled: "When I first visited the steel mill, I counted sheets

being handled 22 different times. Right then and there I figured that a business which had so much lost motion had plenty of future for a young man."

Perhaps so, but continuous rolling of sheet steel had defied the steel industry's best minds for nearly 200 years. (Leonardo da Vinci sketched a diagram for a hand mill, and Welsh steelmakers had been hand-rolling tin plate as early as 1728—a jealously guarded secret handed down from father to son.)

In 1904, the giant United States Steel Corp. had tried to build two continuous mills, but like all previous efforts, it failed.

Young Tytus, who became Mr. Hook's assistant in 1906, quickly decided the mystery of continuous rolling could be solved only by learning what happens to steel during the rolling process.

The American Rolling Mill Co. (already known as "Armco") encouraged such research. By 1910 it had established the first research laboratory in the steel industry, and had developed several specialty products which enabled it to survive competition from larger mills.

During World War I, John Tytus got a rare opportunity for research. The Middletown plant was converted

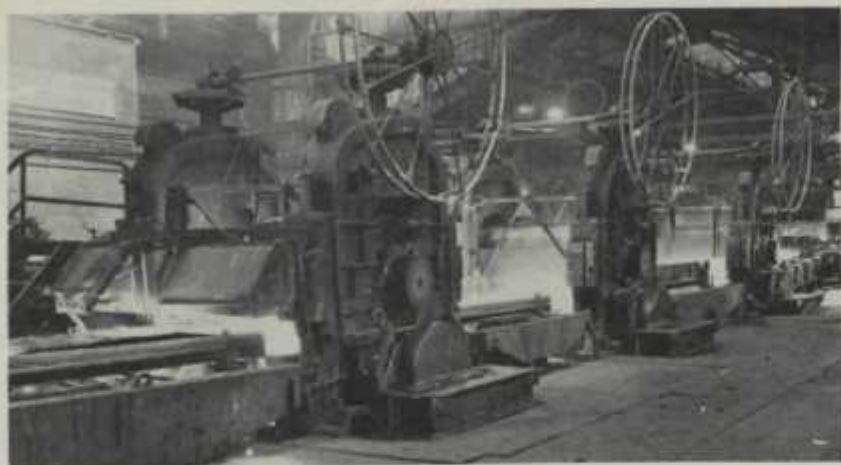
into a huge forge shop to make shells, and the sheet mills were idled. So the mills became a practical laboratory where Mr. Tytus worked after hours to carefully analyze and record what happened to the steel on each pass.

He discovered that the sheets being passed through the mill were not flat, but convex—the center was much thicker than the sides. The sheets became progressively flatter as they were passed back and forth, but they were decidedly convex in the first stages.

When the sheets were passed through the same mill, the necessary adjustments could be made by the experienced roller—this was part of his skill. But for a continuous rolling operation, each mill (or stand) must be preset to accommodate the shape of the metal.

Here was the key ingredient. Designers of earlier mills had assumed the sheets were flat, and their rolls were designed as true cylinders.

John Tytus enlisted the aid of a manufacturer of mill rolls, and after swearing him to secrecy, gave him the design of the new rolls. The first stands were made slightly concave, which induced the steel to run straight through the mill. The concavity was gradually reduced at each succeeding pair of rolls, finally becoming convex



John Butler Tytus was an authentic American business genius, who tackled a problem which had defied the best minds of his industry—turning out continuous rolls of sheet steel. The photo above, of sheet steel production at Armco, was made not long after he succeeded.



as the sheet became thinner and more pressure was required.

Test runs were successful, and Mr. Tytus was convinced he had the answer. With the war's end, however, the demand for sheet steel surged, and the hand mills were no longer available for experiments. In addition, building a continuous mill involved a massive investment for a small company—at least \$10 million.

But Charles Hook and George Verity had faith in their young man, even though failure of the new mill could very well bankrupt the young

company. And they had the spot: Ashland, Ky.

Shortly after the war ended, Armco had purchased the Ashland Iron and Mining Co., which had overextended in ingot production. But to make it a profitable operation, sheet production capacity was needed.

Mr. Verity, Mr. Hook and Mr. Tytus told the board of directors they were willing to risk building a continuous mill at Ashland. So were the directors.

By October, 1922, construction was under way. Altogether, 14 stands were

built, incorporating the principle of progressive convexity to reduce a five-inch thick bar into a sheet of steel. Early in January, 1924, the first bar slid into the new continuous mill.

It didn't make it. A coupling broke. During the next few weeks, there were many days and nights of heartbreak. Experienced rollers cursed at the waste as sheet after sheet buckled, but Mr. Tytus patiently explained his purpose.

"Don't worry about the bad ones," he counseled. "Find out how we make the good ones."

By the end of February, the new continuous mill had produced 9,000 tons of sheet steel and within three years, it was producing 40,000 tons monthly.

As Mr. Verity remarked later, "At the end of all these years, we knew where we stood. We had risked the whole future of our company on this experiment. Now Armco knew it would be repaid for pioneering."

In the spring of 1927, steel industry leaders were invited to Ashland for the first public inspection. And Armco offered to license its patented processes to all competitors on liberal terms.

The mill was a success, and the industry knew it. During the period 1927-40, more than \$500 million was invested in similar rolling mills. Cost of a 16-gauge steel sheet had been \$135 a ton before continuous rolling. It cost only \$60 a ton in 1940—and its better surface and drawing qualities made possible new mass production and styling changes in automobiles, appliances and many other industries. Flat-rolled sheets became the mainstay of the domestic steel industry.

There were complaints the "monster" was taking away jobs, but Mr. Tytus replied, "Did you ever try your hand at the type of work it eliminated?" As with most great inventions, continuous rolling opened larger markets, adding thousands of jobs.

Today, modern continuous rolling mills can produce up to 12 $\frac{1}{2}$ tons per minute of sheet steel—a far cry from the old one ton per hour standard for the hand mill.

John Butler Tytus' invention has been called one of the 10 greatest of the Twentieth Century. It transformed a basic industry and opened the way for a whole new era of low-cost, mass-produced products made from sheet steel. **END**



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A Theme of Success: "Let the Buyer Have Faith"



By
James H. Binns
*President
Armstrong Cork Co.*

Great decisions that alter business organizations—like great battles that change history—are rarely instantaneous, spur-of-the-moment phenomena. Instead, they usually involve a host of closely related, individual decisions, each requiring insight, courage and planning, but all implementing a single objective.

Such was the case with the "great decision" made for Armstrong Cork Co. by Henning W. Prentis Jr. in the early 1920's. The series of decisions he made then brought a number of innovative practices to the resilient flooring business. They were all based, essentially, on two philosophical concepts—"let the buyer have faith" and the "equality of competitive opportunity" in the distribution of goods.

Looking back today we would say that Mr. Prentis was a modern marketing man well ahead of his time.

He joined Armstrong in 1907 and spent his entire business career with the company, serving as president from 1935 to 1950 and as chairman of the board from then until his death in 1959. Along the way he found time to make valuable contributions to business in general, to serve in dozens of public service positions and to be-

come nationally known as a spokesman for private free enterprise.

In the 1920's, general practice in the flooring business was for retailers to purchase linoleum wherever they could get the best price. The price in each transaction depended on who could bargain best, and "caveat emptor" was the rule of the game. It was a veritable oriental bazaar. The consumer, at the mercy of the marketplace in such a situation, found it almost impossible to be sure he was getting good value in his purchase.

Mr. Prentis believed strongly in fairness, responsibility and honesty. Instead of "let the buyer beware," he thought it should be: "Let the buyer have faith."

Linoleum at that time was regarded as a strictly utilitarian product. But he was confident that homemakers would welcome color and good design, and he felt that a more orderly system of distribution would enable consumers to benefit from a wider choice of patterns.

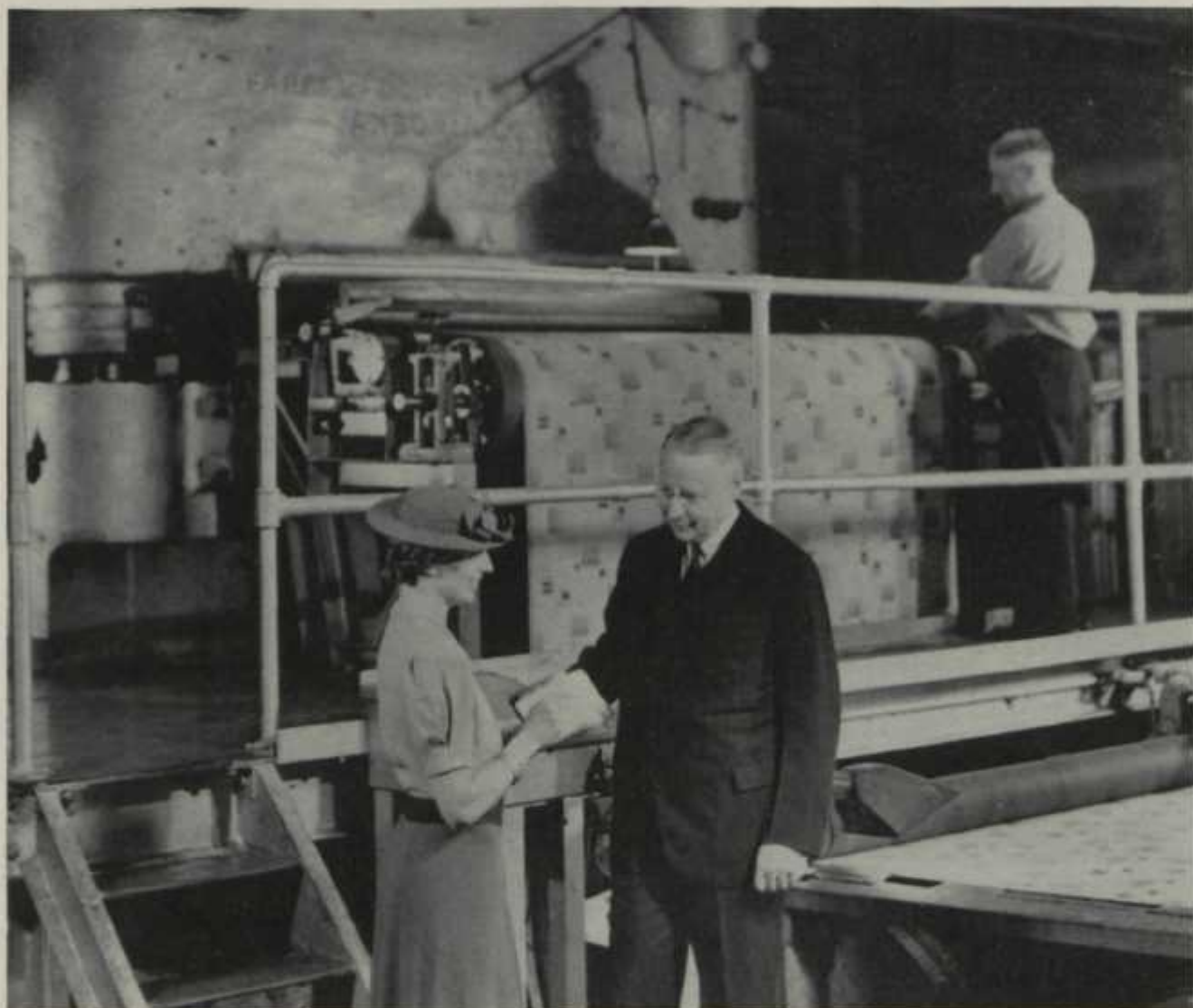
If a bulky product like linoleum were to be made in a variety of styles, colorings and gauges, he reasoned, the most efficient means of distributing it would be through wholesalers who would maintain stocks in strategic

locations throughout the country. But he was convinced this system could operate effectively only in an atmosphere of mutual trust and respect between the wholesaler and his source of supply—something decidedly lacking in those days.

In the chain of distribution, he said, compensation received should be determined by the function performed. Consequently, even the smallest wholesaler—if he truly fulfilled his service function—should be assured a margin better than that given the largest retailer. In short, equality of competitive opportunity.

To replace the secret "deals" between buyer and seller that were then customary in the flooring business, Mr. Prentis set up openly published price lists. He was widely criticized for this open-book approach. But retailers began accepting the new idea as soon as they realized that now for the first time they could know what competing dealers were paying for their merchandise. Now they could spend less time buying and more time selling. Now they could devote their attention to serving the needs of customers rather than to haggling with suppliers.

To carry forth the new marketing



Henning W. Prentis put style on the floor. He ordered Armstrong Cork Co. to produce cheerful, colorful, well-designed floor covers rather than the old overworked utilitarian coverings. Women loved him for brightening up their houses and lady reporters such as this one came to see his products.

approach, Mr. Prentis felt that something was needed beyond the typical selling agent of the time. He began visiting college campuses, seeking out exceptional men who were about to graduate. As he built a marketing force of career-minded young men, he was also launching one of the early college recruiting programs in American business.

"Prentis's college boys," as they were laughingly called when he began the program, were trained in almost every phase of the flooring business as

well as in the importance of meeting consumer needs. This proved so successful that soon Armstrong was being called on to offer training programs for wholesalers and retailers. Then the company established an installation school to develop skilled flooring craftsmen and to assure consumers greater satisfaction with their floors.

With the spread of wholesale distributors, enabling retailers to offer their customers a broad range of flooring patterns, for the first time the floor became an important element in

home decorating. Mr. Prentis also introduced national advertising based upon offering helpful information to the consumer. It was filled with ideas—ideas to make the home more attractive, more comfortable and easier to care for.

By the end of the 20's Armstrong had opened the door to a new era of growth; the flooring business had reached a level of maturity and responsibility never before achieved; and Mr. Prentis had made his mark.

END

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BURLINGTON
INDUSTRIES

Threading Your Way to the Top



By
Ely R. Callaway
*President
Burlington Industries*

In 1923, J. Spencer Love, with the encouragement and backing of the townspeople of Burlington, N. C., built a plant there for production of textile fabrics. It was a time when low cotton textile prices existed in many mills, prompting Mr. Love to turn to a new and untried fiber, rayon. In 1924, the new mill began weaving a blend of rayon and cotton and produced its first new product, a bedspread.

The foundation for the future growth and development of Burlington Industries was formed. It was the unique blend of the man, the moment, the decision . . . that combined to breathe life into a new enterprise.

During these early days, Burlington Mills grew steadily, if not spectacularly. Within a relatively short span of time, it gained a wealth of knowledge in working with the new man-made fiber, so that by 1925 a second plant was brought on stream for making rayon dress goods. Two years later, a third plant was opened in order to accommodate the thriving demand for these goods.

Even though these early Burlington Mills plants were not comparable in structure and design to the present day models from an architectural point of view, they did have one particularly practical feature. While ex-

terior supporting walls were constructed of bricks and mortar, internal walls were made of wood so they could easily be moved or knocked out for expansion.

In Burlington's case, the walls continued to tumble down with an amazing degree of regularity.

By 1937, Burlington was the world's largest weaver of rayon fabric with 22 rayon weaving plants in operation and sales volume of \$27 million. That same year, as "Burlington Mills," it was listed on the New York Stock Exchange.

From synthetic "greige" (unfinished) goods, Burlington moved to the manufacture of finished fabrics. Further expansion and diversification carried the company into fancy cotton fabrics, hosiery, worsteds, plain cotton goods and blends of all fibers. Thus, by 1945, when the newer man-made fibers began to account for an ever-increasing volume of business for textile producers, Burlington had more than 20 years of experience in man-made fibers and yarns.

Along with production experience, innovation and know-how, the company continued to develop its management capabilities. Particular stress was placed on merchandising concepts, new and improved methods of distribution, and service to cus-

tomers. These moves marked a change from the old commission house form of selling textiles. Traditionally, textile mills did not do their own selling; almost all sales were handled by independent commission houses. The system was bad for the industry because decisions about what and how much to manufacture were made in situations totally removed from the buyer.

Management realized that the traditional order must change, and that marketing must determine the mills' output, furnishing direction as to the needs of the market and to developing fashion trends.

That the thinking and the changes made were valid is evident today, because this is now the accepted pattern of the textile industry.

By 1962, Burlington had become a significant force in the nation's economy.

Sales that year reached new highs—\$1.3 billion—reflecting increased volume in all product areas and almost all divisions.

After the death of Mr. Love, the mantle of leadership was assumed by Charles F. Myers Jr., president, and Henry Rauch, chairman, both men of strong financial backgrounds. They knew the company possessed the know-how, the equipment, the talent



This little building in Burlington, N. C., is where the textile giant, Burlington Industries, got its start 47 years ago. J. Spencer Love, one of the giants of textiles, went to the people of the town to ask for backing. He got it and Burlington today is an industry leader. The little building is now part of the company's House Fabrics operation. Burlington is strong on quality, and before packaging, textured yarns are given close, final inspections.



and the resourcefulness capable of producing the textile products demanded by consumers. New emphasis was placed upon research, new product development, quality control standards and new machinery and equipment.

The stage was now set for management to make a critical decision that ultimately:

- Established a totally new awareness of Burlington and its products among consumers.
- Provided the company with a new signature mark.

This decision, in 1965, was a move into national network television. Burlington's sponsorship of a major

weekly network program became an industry "first."

The growing identification of Burlington and Burlington products at the retail level was further expedited by adoption of the "weave symbol" as the company's official signature.

By the end of 1967, Burlington was not only the nation's largest and most diversified manufacturer of fabrics and textile products for apparel, home and industry, but also was rapidly becoming a household word as a result of its consistent promotional efforts. It had 83,000 employees and plants in 98 American communities and in 11 countries abroad.

Burlington's first ventures outside

the realm of fabrics and textile products—furniture and data processing services—already are showing signs of great success. But management is looking to the future, and these ventures are only the beginning. The company has established a New Business Ventures Department which already is researching and evaluating new investment opportunities.

We are not infected with "conglomeritis," but we are looking at many fields to which our technical competence and marketing know-how can bring new dimensions. And when Burlington makes a move—it will be a good one. You'd better believe it.

END

Letting the Genie Out of the Bottle



By
Charles W. Adams
Senior Vice President
The Coca-Cola Co.

In 1955, The Coca-Cola Co. faced perhaps the most difficult decision in its corporate history. Although it had only one product in two packages—the familiar 6½-ounce bottle and the fountain glass—it was a highly successful business enterprise. Volume continued its steady increase from 400 drinks sold in its first year to the rate of 50 million drinks world-wide every day in 1955. Profit growth, too, had kept pace.

Amid this success, a somewhat strange word—change—entered the picture. Change at this stage, many felt, would be merely tampering with success. But the reasons for diversification overshadowed those doubts.

Intuitively we knew that to be true, so we blended our common sense and energy with our intuition and the decision was made to change a one-product firm to a diversified company with a diversified line of products.

This decision was no spur-of-the-moment move. As the entire top echelon of our management weighed the long-range results of diversification, we took cognizance of the statistics of failure. We knew that of the 6,000 new consumer items introduced each year, only about 500 live beyond

their first 12 months. But at the same time, we knew that the world was moving and changing. The world was our customer and we knew that we must move with it.

The first change was, for us, so radical a switch that it amounted almost to the introduction of a new drink. In changing the size of a bottle of Coke, we were tampering with a bottle that had been called with justification "the most perfectly designed commercial package in history." To put Coca-Cola into another dimension, some felt, was almost heresy. We had kept a genie in the same bottle, so to speak, for nearly three quarters of a century and we didn't know what would happen if we let him out.

Based upon a great deal of market research and a series of highly successful tests, we felt somewhat akin to prospectors who had uncovered gold after months and even years of sloshing through the Klondike. Making Coca-Cola available to consumers in larger size bottles, then, was the first cautious step toward diversification for The Coca-Cola Co.

When it came to the second step, marketing new soft drinks, we also moved carefully. We turned to an

item we already had in the house and knew something about. This one, the Fanta line of flavored drinks, had begun in Germany when World War II made the concentrates from which Coca-Cola syrup is produced completely unavailable there. After the war, Coke came back and Fanta was filed but not forgotten. We remembered it in 1955 when we decided to launch new soft drinks. Today, the Fanta line reaches most of the markets in this country.

In rapid succession came Sprite and Tab, rapid in the sense that they came quickly into the marketplace. Actually, when considered from the standpoint of money invested and time spent, no market research program leading to new product introduction moves more slowly or with greater in-depth consideration than does ours at The Coca-Cola Co.

After the introduction of Sprite and Tab came our third step in which we ventured outside the company. In 1960, we acquired the Minute Maid Corp., the firm that held the top position in the citrus processing industry. Moreover, Minute Maid itself had been doing some diversifying and had previously acquired an instant coffee



High echelons of The Coca-Cola Co. worried 15 years ago when it was decided to put Coke into bottles other than the familiar 6½-ounce one at right. The bottle had evolved over the years, as the lineup shows, and had years of public acceptance. The firm took a fearful breath, ordered larger bottles like the one below, and thrived.



company. As a result, we were automatically in the coffee business. A logical next step was for us to keep looking down that road and in 1964 we joined hands with Duncan Foods Co., which made and distributed a top line of coffee products on a regional basis. More recently, two other new products, Fresca and Simba, have been introduced.

Fresca, the blizzard drink, was four years in the making and was introduced in 1966. It was one of the most spectacular successes in the history of soft drinks, achieving 95 per cent national distribution in one year.

The Food and Drug Administration's recent ban on cyclamate produced minimal effect on total Coca-Cola Co. business. Reformulated versions without cyclamate were prepared in a relatively short time.

Our newest product, Simba, a tart citrus-flavored drink that is sugar-based, has just recently been introduced. As much preparation, testing, feedback and retesting goes on with one of our marketing programs as goes on in the laboratory. To put millions of dollars behind a product that does not give reasonable evidence of consumer acceptance would be wasteful.

At the same time, to have a product that consumers tell you they like and not then give it everything you've got would be an even greater waste.

Standing on the threshold as we were in 1955, we could see the future around us. We knew that diversification would continue us on the upward road. Today the world calls for Coca-Cola over 100 million times a day, and that call includes only Coca-Cola and not the 17 other soft drinks manufactured by The Coca-Cola Co., nor does it include the other beverage products of the company's Foods Division and Tenco Division.

In addition to its business of carbonated beverages, The Coca-Cola Co. is the world's largest processor and marketer of citrus concentrates and drinks, a cultivator and harvester of thousands of acres of citrus groves, the world's largest producer of private label instant coffees and teas and one of the foremost U.S. coffee importers and roasters.

This diversity of products, 250 in all, has pushed corporate sales to a record of \$1.185 billion in 1968. A lengthy sprint for a venture which netted \$50 in the first year of its lifetime.

END

It All Began With the Boll Weevil



By
Charles H. Dolson
*President
Delta Air Lines*

Few of us have to look back too far to remember when airlines were hardly more than several score pioneers who, with small bands of visionary financial backers, kept their visions alive despite bad weather, elementary equipment and the growing pains of public and governmental recognition. The history of commercial aviation is the story of hope, bone-grinding work, the devotion of its adherents and supporters, and their perseverance against odds which now would seem almost impossible.

My life has been Delta Air Lines, and I would like to trace some of its history and point to its part in a unique industry, one which only in the postwar years emerged as a powerful part of the national economy.

Delta literally flew out of the Louisiana and Mississippi cotton fields to become the nation's fifth and the world's sixth largest carrier.

In 1931, it had five permanent employees: its founder, C. E. Woolman; a secretary; two pilots and one mechanic. Slowly the little group gathered size and, across the years, followed Mr. Woolman to a future that few believed could happen.

Delta came about because of C. E. Woolman's war on boll weevils. In the earliest days, Mr. Woolman, then a Louisiana State University agri-

cultural extension agent stationed in northern Louisiana, saw airplanes as the salvation of the Southern cotton industry, which was on the brink of disaster from insects that had moved north from Mexico.

He believed insecticides could be less expensively and more effectively spread by airplanes than by cumbersome ground equipment, and became associated with the founding of Huff-Daland Dusters, Inc. In 1931 the company's equipment included 13 Huff-Daland biplanes, a Curtiss Pusher, an OX-5 Travelaire and an OX-5 Commandaire. The first general office and hangar were at Selman Field, then a grass strip, at Monroe, La.

The Huff-Dalands were used as dusters and the others were used in student training and emergency work such as spotting power line breaks. The company operated up and down the Mississippi Delta country, in Louisiana's "river parishes" and in other places where its services were needed. During off seasons it hauled passengers and trained pilots. It even operated in South America during some of those off seasons and, there, formed the basis of what later became Panagra.

The company's first passenger airline operations started in June, 1929,

between Dallas/Ft. Worth and Jackson via Monroe and Shreveport. All across the U. S. other struggling airlines were flying a smattering of passengers, mail and freight, working from day to day, from job to job.

Then, in 1934, a major change came. I was standing behind Postmaster General James A. Farley when the new airmail bids were opened. I have always thought of that day as the time the airlines became a major industry. I had been a U. S. Navy pilot and believed I could see a future in the airline business. It is safe to say that it would have been difficult for any of us with Mr. Farley that day to imagine what is happening now.

Delta won the right to carry mail on "AM-24," the route between Dallas/Ft. Worth and Charleston, S. C., via Tyler, Shreveport, Monroe, Jackson, Meridian, Birmingham, Atlanta, Augusta and Columbia. I was privileged to fly the inaugural Stinson "T" flight between Atlanta and Charleston on July 7, 1934. I have been a Delta employee ever since.

What has happened in the airline industry since those days is awe-inspiring. It now employs hundreds of thousands of citizens, spends billions on new equipment and provides a method of transportation which is



Delta's planes once were like this tiny Huff-Daland crop duster, which now is in the Smithsonian Institution in Washington. Today, Delta flies jets like the majestic DC-8 in the background.

rapidly shrinking the world. It is a measure of the latent genius and energy always present in our free economy, a "rags to riches" story of unparalleled opportunity presented and accepted.

From the five original people and 16 small airplanes which started operations in Monroe many years ago, Delta is today over 19,000 people stationed in 61 cities across a 20,539-mile route system. We serve the financial and industrial centers of the East and Midwest, the major growth cities of the South and Southwest, the dynamic West Coast, and the vacation areas of Florida and the Caribbean.

The original airplanes, one of which recently was rebuilt and refurbished by our employees as a gift to the Smithsonian Institution in honor of Mr. Woolman, have been replaced by the finest airplanes ever designed and built. Delta operates 125 jets now—Super and standard DC-8's and DC-9's, Convair 880's and Lockheed L-100-20 air freighters. We pioneered all of them in regularly scheduled airline service.

One of our Super DC-8's, the largest jet currently in commercial service, will carry more passengers on a single flight than all of our prewar DC-3's and Lockheed Electras could carry

across the original Jackson-to-Dallas route at one time. From the original \$100 Delta collected from a planter for its insecticide service, our total operating revenues have consistently risen—to \$516,133,000 last year.

To make another comparison, Delta's maintenance, by 1941, was conducted in one relatively small hangar at Atlanta Municipal Airport. Today we operate one of the nation's largest jet maintenance facilities. Already increased by 90 per cent since its original construction in 1961, it is being almost doubled again to accommodate the "third generation" jets. When this newest expansion is completed two years from now, it will occupy nearly a mile of frontage on the main runway at Atlanta Airport.

All this rise to success did not come about only because of new equipment, buildings and procedures. Public acceptance of the airlines, and the consequent acceptance of the airlines as realities by the nation's leaders, happened because of airline people. Delta, which I believe is singular in an almost matchless industry, grew because of its people, its leaders and its heritage.

The original inspiration of loyalty, perseverance, honesty and courteous, sincere service to our customers has never wavered across the years. No

one here forgets that the passengers who fly Delta pay our salaries.

A major contribution to Delta's success has been the continuity of its management. The five senior vice presidents who work with me have devoted their entire airline careers to Delta. Collectively we represent 143 years of service with the company. Delta's management group has been developed almost entirely from within the ranks of veteran employees. Many are former pilots, mechanics, reservations and ticket agents, timekeepers or accountants.

While it has been extremely gratifying to have been part of a company and industry which have in such a short time gone so far and high, it is exhilarating to imagine what is ahead. For I believe that the progress and expansion of our past will be greatly overshadowed by what is going to occur between now and the turn of the century. The new airplanes and new methods of passenger handling are going to again change a nation's way of life and effect drastic changes in this world.

If the people of our industry, and Delta in particular, continue to demonstrate the technical acumen and human spirit which have brought us to the position which is ours today, we are just starting! **END**

Encourage the Seeker —and Find Nylon



By
Samuel Lenher
*Vice President and
Member of Board of Directors
E. I. du Pont de Nemours & Co.*

The year 1902 has long been tagged as the birth year of the "modern" or "new" Du Pont Co. The family ownership of a century yielded that year to a publicly held corporation.

But the fact of the matter is that the moment of decision, the time of maturity, was a quarter-century later. It came when a Du Pont research leader's plans crystalized; when, as he said later, he knew he had "a sympathetic administrative attitude." The latter was in the person of 47-year-old Lamot du Pont, company president of one year, a chemist who was well-informed on the new directions and challenges of the chemical industry.

Dr. Charles M. A. Stine, not yet 44 although a 20-year veteran of Du Pont research, had been chemical director since 1924. Small, intense, already of respected stature among U. S. industrial scientists, Dr. Stine knew that the time had come for chemical manufacturers to stop depending on research developments in academic institutions before making their moves.

Dr. Stine had sounded out the company's research directors on what

the company needed to revitalize itself and had laid down "lines of work" he was contemplating. That work was a program of fundamental studies principally in organic chemistry, chemical engineering and catalytic processes.

Already practiced with success by a few companies, fundamental research was virtually unknown in the U. S. chemical industry. Dr. Stine was confident that Du Pont was now ready for it.

He defined fundamental research as "a quest for facts about the properties and behavior of matter, without regard to a specific application of the facts discovered."

To most interpreters, "without regard to a specific application" is the heart of the matter. Dr. Stine, however, carefully pointed out in all discussions of his dream program that "fundamental research properly carried on is bound to add to the sum total of knowledge, some . . . results of which may be immediately useful and all of which will eventually be so." He added that "fundamental research . . . is not . . . a labor of love;

it is . . . a sound business policy, a policy that should assure the payment of future dividends." (Today, half of Du Pont's sales are in products of Du Pont research introduced since 1945.)

This careful tempering of the fundamental research definition appears so often in Dr. Stine's writings and public statements that we can almost hear him using it in powerful persuasion with Lamot du Pont.

Now, listening to Dr. Stine's proposal that the Du Pont Co. undertake a program of research studies previously practiced only by universities and a few foundations, Lamot du Pont agreed. Moreover, he agreed without reservation to Dr. Stine's condition that the work be carried out regardless of the immediate practical value it might have for Du Pont. He continued his strong support throughout the Depression years which followed.

His historic decision set a course which profoundly affected future research throughout the chemical industry. Companies especially alert to the seemingly unlimited possibilities



Dr. Charles M. A. Stine, arguing that a company such as Du Pont should not have to depend on universities for new ideas, won approval for a program of "fundamental research." He said resulting additions to Du Pont's sum of total knowledge should prove "useful." They most certainly have.

of polymer chemistry, to which Du Pont's program gave new life and strong practical application, were to become fierce competitors later through their quick pickup of Du Pont's pioneering approach.

For Du Pont, success was not immediate, but when it came, it was spectacular.

Dr. Stine searched the universities for exceptional men to give his program a good start.

Principal among them was the man who was to head the organic chemistry group—Dr. Wallace H. Carothers.

Electing to explore the synthesis of long-chain molecules, or "superpolymers," Dr. Carothers succeeded eventually in producing the polyamide which was introduced in 1938 as nylon.

The first decade of Du Pont fundamental research also produced neoprene, the first successful general purpose synthetic rubber.

Dr. Stine and his bright young men were able, too, to report other "substantial contributions," both to the scientific literature and to the company's progress. Most important

of all to Du Pont's future was the penetration of high polymer thinking into the company's operating departments, thereby assuring a continuity of practical effort. Thus were created whole new families of fibers, films, plastics, paints, elastomers and related products.

The moment of decision in 1927 transformed a company somewhat provincial in its interests and operations into an international corporation which today has 114,000 employees and 1,400 product lines serving every industry. **END**

"You Press the Button and We Do the Rest"



By
Frederic S. Welsh
Vice President
Eastman Kodak Co.

The bank clerk was 23 in 1877. Photography was going on 50. Their first meeting was totally undramatic (the young man paid \$5 for a series of photography lessons in preparation for a vacation trip) but because of it, photography—and the world—were never quite the same.

Photography had had its great men, who had produced some magnificent photographs, but until George Eastman, no one man combined the vision of what photography could be with the practical genius to achieve it.

When Mr. Eastman happened upon it, photography was cumbersome, laborious and strictly do-it-yourself. The photographer mixed his own emulsion, poured it onto a glass plate, rushed the plate to his camera, took the picture and then carried the still-wet plate back into the darkroom to be developed. If he ventured out of his studio to work, he had to carry chemicals, plates, dark tent and camera with him. As Mr. Eastman later described it, "In those days one did not 'take' a camera; one accompanied the outfit of which the camera was only a part."

A comparatively small number of professional photographers did manage to make a living, and a considerably smaller group of amateurs—who were challenged by the difficulties involved—devotedly toiled and sloshed.

The practical Mr. Eastman, however, was not of this breed. With that dynamic laziness which inspired so many other great inventors, he set out to make photography easier.

He began by reading everything he could find on the subject. Since much of the literature was in French and German, he studied both languages until he could read the technical papers. His chemistry was picked up in the same fashion. (He had left school at 14, and had had no technical training.)

When he read of the new dry plates, which could be coated in advance and kept until needed, he began experimenting on his mother's kitchen stove. Once he had mastered the art of producing dry plates, using a formula from the *British Journal of Photography*, it occurred to him that there would be a ready and profitable market for good plates if they could be produced in quantity at a reasonable price.

With this in mind, he set to work, and by 1879 was on his way to England, the center of the photographic world, to apply for a patent on his plate-coating machine.

In 1880, the Eastman Dry Plate Co., George Eastman, Prop., was open for business. And things began to happen to photography.

Glass dry plates, for all their ad-

vantages, were still heavy, awkward and fragile. A substitute for glass as the support for the light-sensitive emulsion was needed. By 1885, Mr. Eastman had not only provided this substitute, he had given photography a whole new concept as well. He called it roll film. His next step was to hire a research chemist to find a way to make film even better. This, too, was a new concept.

The Eastman-Walker patented roll holder, which held the strip of paper-backed, sensitized film, could be fitted to any plate camera. Except that, as the factory soon reported, the construction of the roll holders was considerably better than that of most of the available cameras. The solution was to produce his own camera, and Mr. Eastman, with the aid of a woodworker named Brownell, began work immediately.

But he aimed beyond just a camera; his goal was a complete system of photography.

In 1888, with the introduction of the No. 1 Kodak Camera, his goal was achieved, and the era of the snapshot had begun. Replacing the pack-horse load of the wet plate photographer, there was now a small black box which could be purchased for \$25, loaded with enough film for 100 pictures. All the photographer had to do was aim the camera, pull the string



The Eastman Kodak Co.'s corporate name had been adopted by the time the above photo was made in 1892. George Eastman, shown below at age 28, once said, "We are running a very complicated and difficult business. I do not know of any that depends more upon the good feelings and faithfulness of its employees."



to set the shutter and press the button to take the picture. When he had done this 100 times, he returned the camera to the Eastman Dry Plate & Film Co. factory in Rochester. For \$10 it was returned to him reloaded, with the pictures he had taken beautifully printed and mounted. Or, as Mr. Eastman summarized it in an inspired advertising slogan, "You Press the Button, We Do the Rest."

Thus the pattern, and the pace, were set. Transparent film on nitro-cellulose base succeeded the original paper-backed stripping film in 1889. Within another year, the Kodak camera was being advertised in seven styles and sizes, and film manufacturing plants were under construction in Rochester and in England.

Eastman Kodak Co. was on its way. The way has, thus far, led photography even farther into inner space and outer space. Kodak film has recorded video images of Mars from 2,000 miles out and the Eastman Kodak Lunar Stereo Close-Up Camera has photographed the soil on the moon. At the same time, photography has become simple enough for a seven-year-old boy to make good vacation pictures.

The Eastman dream of what photography could become has yet to be fully realized. As far as Kodak is concerned, it never will be

END

Riding the Model T to Mass Production



By
Allan Nevins
Historian, Scholar, Educator

From its incorporation in 1903, Ford Motor Co. gave America countless innovations and made innumerable momentous decisions contributing to the ferment and growth of the vast automotive industry in this country.

Some would identify the decision to battle relentlessly against the effort of owners of the Selden patent to dominate the automobile industry as a most striking single step.

Some would give this primacy to the decision, after the Panic of 1907 had prostrated half the motorcar manufacturers of the United States, to undertake a new Model T—distinguished by such improvements as vanadium steel, an improved magneto and carburetor and stronger transmission—and push it by expansion of the sales organization with new branches, dealers and efficient services.

The succession of great new steps led—through the lowering of Model T prices to bring it within reach of the poor mechanic and farmer, the introduction of the V-8 engine in 1932 and the adoption of such liberal policies as Ford's \$5 day and its employment of handicapped men and former convicts—to the emergence of Ford Motor Co. as one of the greatest money-makers in the United States, amassing profits of over \$900

million in 1927, and able to breast the Depression of 1931-1933 triumphantly.

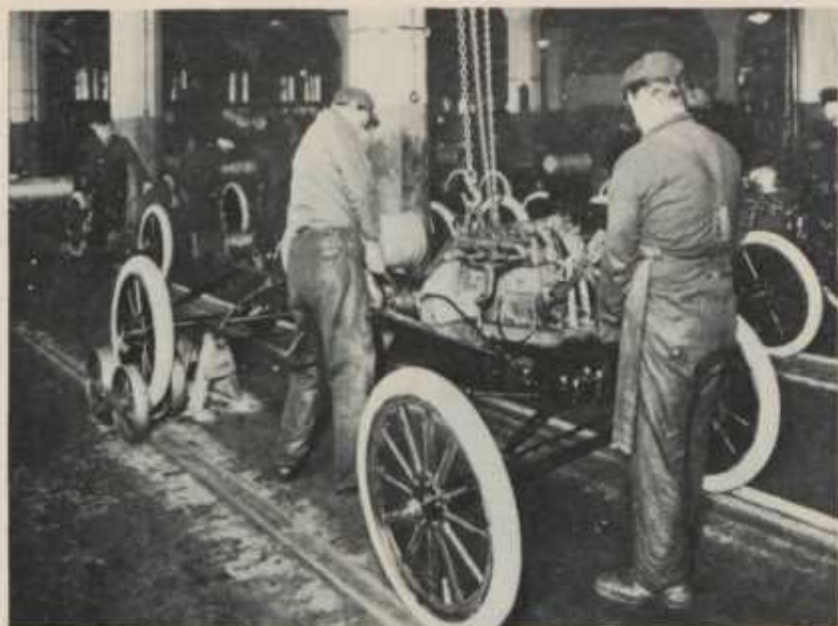
But in the long view of history, probably the most original and powerful executive action by the heads of Ford Motor Co. lay in a series of steps culminating in the adoption of mass production methods, making Ford not only one of the most productive and richest manufacturing corporations in America, but the perfecter and master of a mode of work that changed the face and value of industry the world over. It enabled Ford to make a tremendous contribution to the success of the United States in World War I, in the second great world conflict and in ensuing world struggles.

To grasp the momentous character of these policy decisions, it is essential to understand the true character of mass production. It is not merely quantity production, with which it is often confused. It is a modernized mode of manufacture which combines uniformity and continuity of motion in all factory procedures and assembly lines, speed achieved by scientific time studies, and precision of every part and operation. It makes uniformity of design, accuracy of part changes and economy of performance possible.

Mass production also requires such

specialization of machinery and machine operation that one task may be assigned to one man, or one separate machine function, with repeated subdivision. Early specialization and standardization enabled the International Association of Machinists in the Detroit area to declare in 1896 that "the all-around machinist" was "dying out," the jack-of-all-trades in the factory was disappearing. Craft unions, once so powerful in Detroit as in other industrial cities, were giving way to the specialist, expert in one small machine activity. Thus a way was paved to automation, which became a prime element in mass production.

Ford Motor Co. began to face a really grave manpower shortage when it announced at the end of winter in 1908 that it was working a full force not only on days but at night as well. It had installed ever finer and more elaborate tools. Edsel Ford lost the tip of a finger to a fine Hendy lathe he was using. Henry Ford, a thoughtful man, then read a great deal or, as an associate records, "would sit quietly and think." He knew all about the incessant changes taking place in the metal trades, and in rival motor works; he knew aviation well; he liked experiment and put an experimental department in his factory. He was glad to see a new model give



Henry Ford began use of the moving assembly line in earnest in the summer of 1913. He was able to speed production to the point where a completed Model T rolled off the line every 10 seconds.

a livelier zeal for efficiency to Ford shop work. In 1911, as *The Detroit News* noted, he slapped a workman on the back, praising his beautifully kept machine and zest for work, so that in a few days every machine in the Ford department "shone like a diamond." In fact, he shared in a strong wave of enthusiasm for technological advancement and efficiency that swept the automobile industry in 1908-1909.

The Panic of 1907 and Depression stimulated a movement for simplification and standardization of a limited number of new and highly durable motor parts. Supervision of the badge-wearing Ford employees by strict, experienced plant superintendents P. E. Martin and Charles Sorensen was watchfully stringent. Ford Motor Co. was proud that, from a 10-hour-a-day industry (some American factories worked their men longer), the Ford plant went to a nine-hour day between 1905 and 1910, though hours later rose again. On March 19, 1908, the first circulars on the Model T went to Ford dealers, getting an enthusiastic response. Ford executives might well raise a joyous chant: "This car sounds the knell of high prices and big profits."

Various men had played key roles in creating the epochal new machine: Joseph Galamb, C. Harold Wills,

C. J. Smith. Some improvements in bearer-adjustment, spark and throttle control and planetary transmission belonged less to the Ford Motor Co. than to the broad advance of the industry. Precise authorship of some main features of the revolutionary new car can never be determined. But the conclusion stated in the most accurate Ford history may be allowed to stand:

"When all allowances are made, we must repeat that general credit for the Model T unquestionably goes to Henry Ford. His was the controlling plan for a light, powerful, trustworthy cheap car; his was the guiding mind; his was clearly the most powerful personality. We might be tempted to fall back on the usually accurate theory of social invention, but all the survivors of that era who have left reminiscences agree as to his leadership and his paramount contributions.

"In some mechanical matters, men then—as later—found in Ford an extraordinary power of divination."

Mr. Ford owed much to his fellow workers, Mr. Wills, Mr. Galamb, August Degener, Mr. Smith and others.

He and his associates had created the Model T. The Model T and its successors created mass production. Of course, mass production came in by degrees, unevenly and irregularly.

Some early steps were primitively picturesque. The moving assembly line, for example, appeared in the Piquette plant as the company was about to move to Highland Park. Mr. Ford, Mr. Martin and Mr. Sorensen were anxious to install it, as was later described by a veteran:

"At the Piquette plant I remember that they built a line . . . out of railroad ties, iron slides and some horses. They put the chassis on there (that is, on the iron slides), and they pulled it with a rope. . . .

"They made a long line, maybe 20 or 30 feet long, with the two rails. They put the front axle and the rear axle on it, and they slid it along so they could connect all the parts that were necessary—the engine, brake, and other different parts. That was the start of the assembly line."

The summary of Ford operations for the year closing June 16, 1909, recorded a factory space of 12 acres; average number of employees, 2,190; and the number of cars built, 10,660. Mr. Ford could well say gleefully to Mr. Sorensen: "We're on the right track here. We're going to get a car now that we can make in great volume and get the price away down." He might have added that the Ford management had opened a resplendent new chapter in the industrial history of the Western World. END

Into the Barn —and a Lofty Future



By
Dr. Arthur M. Bueche
Vice President
Research and Development
General Electric Co.

One of the "great moments" in General Electric Co. history was the day a young professor of chemistry from the Massachusetts Institute of Technology walked into a barn behind the Schenectady, N.Y., house of Charles Proteus Steinmetz, the electrical industry's "mathematical wizard" who was then GE's chief consulting engineer.

The barn was the first home of what we believe was the first industrial laboratory in the United States conceived with the specific objective of conducting basic research—looking for new knowledge about nature. The young man from MIT, Dr. Willis R. Whitney, then a part-time employee of GE, became its first Research Laboratory director.

His meeting with Mr. Steinmetz took place in the fall of 1900, but our historical records do not tell us the precise day of the "great moment." We do know that before winter was over the barn had burned to the ground. But the idea—that basic research could be done in industry—lived on, nurtured in a succession of larger and larger facilities by the genius of Dr. Whitney, and by the foresight and courage of the company's chief executive officers.

Today it is a cliché to say that technology is one of the forces that

most conspicuously shape our world and that technology springs from the discoveries of science. In 1900 the truth of these statements was not so obvious. It was appropriate—perhaps inevitable—that the first industrial laboratory directed toward basic research in the U. S. should have been established in the young electrical industry, since that industry was so clearly built upon the scientific discoveries of the preceding decades.

Men like Faraday and Henry made possible the inventions of men like Edison, and the more farsighted leaders of the electrical industry recognized that if the flow of applications was to continue, basic scientific research in the field would have to be nourished.

General Electric found such leaders in a small group at or near the top of the company: Edwin W. Rice, vice president and technical director; Elihu Thomson, a former high school science teacher and inventor, whose arc lighting system had been the reason for the formation in Lynn, Mass., of the Thomson-Houston Co., the firm that had joined with the Edison General Electric Co. to form GE; A. G. Davis, manager of the Patent Department; and, of course, Mr. Steinmetz himself, who had never been without a personal laboratory,

of one sort or another, since he had been a boy.

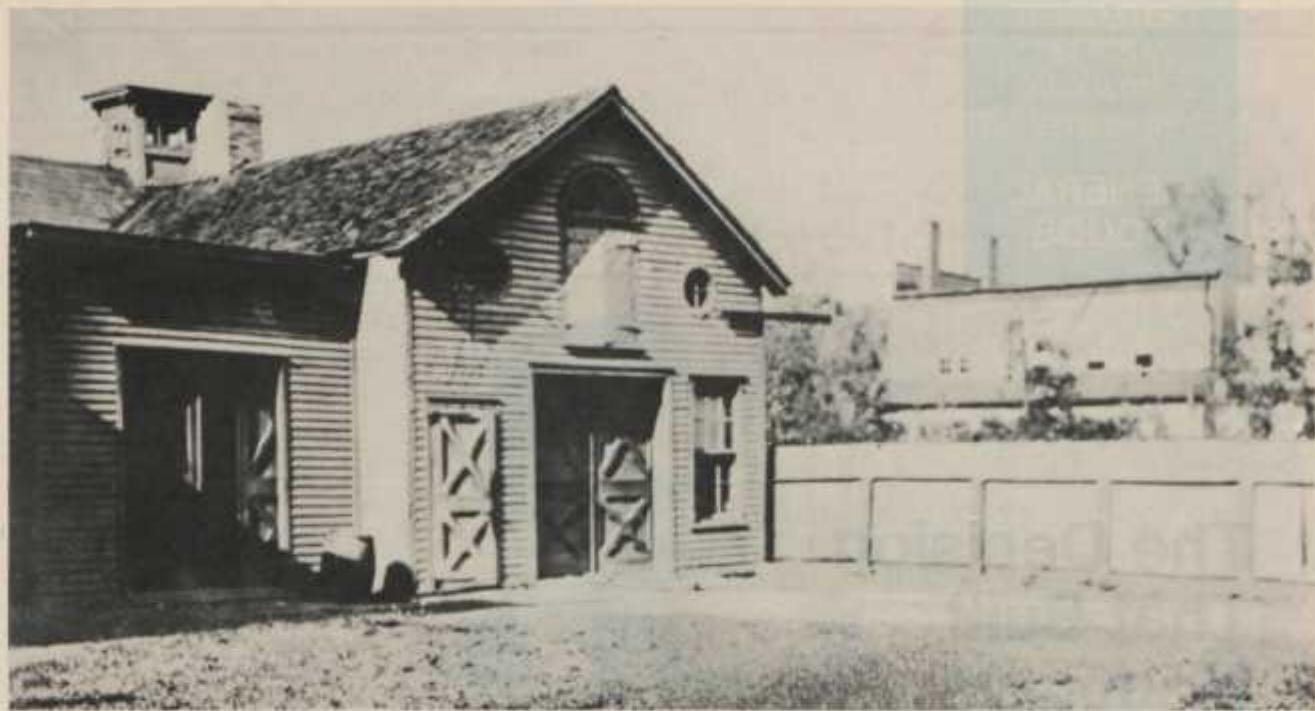
All were involved in the decision to establish this new kind of industrial facility.

Late in 1901, Mr. Rice told the company's shareowners:

"Although our engineers have always been liberally supplied with every facility for the development of new and original designs and improvement of existing standards, it has been deemed wise during the past year to establish a laboratory to be devoted exclusively to original research. It is hoped by this means that many profitable fields may be discovered."

The independence of thought and the freedom of choice that are inherent in the concept of basic research are not very compatible with a narrowly limited technical horizon, so it is not surprising that the spirit that led to the establishment of such a laboratory has led, in succeeding years, to technical activities that span a very wide spectrum.

Today, the company has nearly 400,000 employees, world-wide, producing 230,000 different products, in fields that encompass a good portion of the technological scene: aerospace, aircraft engines, appliances and television, consumer products, components and materials, construction, in-



General Electric research and development began in this barn in Schenectady, N. Y. The men, who did magnificent early work, are (left to right) Charles Proteus Steinmetz; Mr. Steinmetz's technician, Thomas Dempster, and Dr. Willis R. Whitney. The barn belonged to Mr. Steinmetz.



dustrial products, information systems, and power generation, transmission and distribution. GE engages in 14 of the 21 U. S. basic industries.

The range of technical interests is reflected in the more than 100 laboratories serving specific parts of the company, in addition to a corporate-level Research and Development Center—an offspring of the original

Research Laboratory and other laboratories designed to serve the company as a whole. Thirty thousand employees have four-year technical degrees; 1,200 hold doctorates.

GE's decision, implemented over the years, to work primarily in fields with a high technological content has shaped its character as a technical company and as a company that has

"grown from within." But—as with individuals—there is considerable challenge associated with such "character-building."

In recent years, the company has thrust itself into three major fields that we felt were important in themselves and in which there are tremendous technological challenges: nuclear power, jet aircraft engines, and information systems. We are certain that our decision to commit ourselves to them will prove to have been wisely taken, but there is no denying that they have demanded much of us in terms of our available resources.

Just as General Electric has changed a great deal since those days in the fall of 1900, when the little company of 10,000 employees was deciding to try something new in research, so has our world changed a great deal, especially in the essential role that technology plays in our lives.

Perhaps we can be excused for feeling some pardonable pride at the foresight our predecessors showed when they chose to institutionalize the alliance between General Electric and the continuing search for scientific knowledge. Willis R. Whitney was opening the door to a remarkable future on the day that he first walked into Mr. Steinmetz's barn. Which ever day it was. **END**

The Decision That Built Managers



By
C. W. Cook
*Chairman of the Board
General Foods Corp.*

Company management generally can be described by one of four words: Autocratic, centralized, collective or decentralized. Normally I don't like classifications; they leave out too many fine points that count a lot when you're trying to understand a living organism. But these four terms do fairly well cover the management spectrum, from the single concentration of power at one end to its radical dispersal at the other.

They also define the directions in which General Foods could move following World War II, when we made the decision that I believe had a greater influence than any others in recent years on our business.

Specifically, we felt our managerial system at the time restricted the strengths of our top leadership. Secondly, it did not encourage the development of the additional strong leadership we knew we must have to achieve our goals.

Until 1946, General Foods was operated under a basically centralized management. Manufacturing, sales, marketing, research, personnel and other key functions were administered by corporate headquarters. There were many signs that this system was out of phase with our actual needs.

The corporation had widely diversified its production by a number of acquisitions since the Postum Cereal Co. began to expand by acquir-

ing Jell-O in 1925. We were processing and distributing cereals, flour, coconut, chocolate, syrup, coffee, laundry products, desserts, dog food and a growing line of frozen foods. Our top managers found themselves more and more snarled in scores of daily decisions that were frequently unrelated to each other, sometimes in actual conflict and certainly exhausting in their multiplicity and repetition.

Consider one example: General Foods had a single sales force for all dry grocery products. This made little sense when you considered that these products could be as different in nature, use and sales potential as coffee and coconut. It was evidently time to rearrange our managerial resources. Our many plants, products and markets called for decisions to be made closer to the firing line. Authority belonged where the action was.

This sounds like a cue to decentralize. We didn't hear it that way. We had to have something better than a simple distribution of authority. Our goal was management that could act with greater independence and agility but without losing its sense of the corporate whole or the advantages of corporate strength.

What we did, briefly, was to lodge authentic managerial responsibility at the operations level—that is, with the general managers of our divisions. At the same time, we retained respon-

sibility for company policy, objectives and coordination at the corporate level. We supported the divisional general managers with staff offices in special fields of expertise, such as finance, law, manufacturing and engineering services, public relations, advertising services, purchasing and traffic.

But as so often happens with enthusiasm for a new idea, we moved too far. By 1949 we had established 16 divisions. It soon became evident that a division must be substantial enough in production and profitability to stand alone. Many of our 16 divisions weren't. Over a period of years, we reduced the number to our present seven.

I feel bound to say we achieved gratifying success in not dispersing authority into fragmented, isolated units. At the same time as we gave serious, autonomous authority to our divisional chiefs, we made certain to share with them an intense, continuing knowledge of the corporation's over-all goals and needs—to deepen and broaden their understanding and perspective. Managers were able to act independently, yet with maximum insight into our total plan. This gave divisional decisions a force and effectiveness they would not otherwise have had.

Corporate management received valuable feedback. Its decisions were

supported by and based on the hard, factual realism of line experience. Managerial development moved in both directions, corporate and divisional. In time we intensified this valuable interchange by bringing divisional and corporate management into a single headquarters complex in Westchester County, N. Y.

For me, two advantages stand out among the many that our management system has brought to General Foods:

- The managerial load is better distributed. There is less waste of individual ability, less misdirection of managerial energies.
- A special kind of manager has developed. He has independence of viewpoint. He is open to better ideas than his own. He is resourceful and flexible. He fears caution above risk. Such men have risen to the new levels opened to them.

This type of management builds men, and they build the business.

Organization tends to frustrate people. This is part of the basic conflict that exists between the individual and the system he is a part of. I think General Foods' management organization substantially reduces the conflict, giving maximum room to individual creativity. It unites two forces, the spirit of freedom and the spirit of collaboration, in the pursuit of the corporation's goals. **END**



C. W. Post had less than \$100 worth of materials and equipment 75 years ago, when he first made Postum in Battle Creek, Mich. From that tiny beginning, we now have General Foods Corp.—diversified, efficient and profitable.

"Boss" Kettering's Decision: Build a Better Diesel



By
Richard L. Terrell
*Group Vice President
General Motors Corp.*

"For a century, steam has been the principal railroad motive power. It still is and, in my view, will continue to be."

That public assertion was made in the spring of 1938 by the president of one of the country's largest railroad locomotive builders. It stands in my memory as a symbol of the end of an era.

It also marked the beginning of one of the most exciting and revolutionary changes in mass transportation that I have ever personally witnessed—the complete change from steam to diesel power for railroad locomotives.

And it really was a revolution. Just nine years later, another president of that same company sadly reported that his firm had ceased steam locomotive production because, as he put it: "All orders and inquiries for new motive power from domestic railroads are for diesel-electrics."

As a young service engineer at General Motors Electro-Motive Division in La Grange, Ill., I had an opportunity to observe the revolution and even to participate to a slight extent, because it was this then-virtually-unknown General Motors division that led the fight to unseat the steam

engine from its century-old reign as the prime power source for railroads.

The story actually began in the 1920's when General Motors' research director, Charles F. Kettering, was engaged in experimental and research work with two-cycle diesel engines. The four-cycle diesels of that period were heavy and sluggish, and most designers assumed that these characteristics were inherent in the diesel design concept.

"Boss Ket" thought otherwise. It was his opinion that existing diesels—and most of them were used in ships or as stationary power plants—were designed according to steam engine practice. As he put it, no one really was interested in seeing how a diesel wanted to be built. He set out to develop a lightweight, two-cycle diesel engine that would do twice the work at half the cost. By 1930, he knew it could be done. General Motors established the Electro-Motive Division to bring the new engine to market.

By 1933, General Motors' development of the two-cycle diesel engine had reached a stage which justified experimental use of these engines, and a prototype engine was built for use in submarines.

The timing was highly significant for the locomotive field. After four years of depression, 55 railroads were in receivership. The industry was searching desperately for ways to improve its earning position by boosting traffic volume and reducing costs. More and more railroaders were beginning to recognize and talk about the need for higher powered engines.

One line, the Chicago, Burlington & Quincy Railroad Co., decided to try the two-cycle diesel in its new streamlined train. On May 26, 1934, this new streamliner, the Pioneer Zephyr, made its dawn to dusk run from Denver to Chicago in approximately 13 hours, at an average speed of 77.6 miles per hour.

Mr. Kettering's lightweight diesel had gained entree to the locomotive field. The revolution had begun.

Of course the fight wasn't won easily. Our competitors were quick to point out our frequent product failures. It was necessary to dramatize the advantages of the new diesel to potential customers, many of whom still were in receivership.

To do this, Electro-Motive developed a new method of selling called an economic study. It projected the



Charles F. Kettering (below), General Motors' research director, decided to build a lightweight, two-cycle diesel engine that would do twice the work of the sluggish four-cycle diesels of the 1920's at half the cost. And he did, taking the starch out of the steam engine. The Chicago, Burlington & Quincy Railroad Co.'s Pioneer Zephyr (being shown off in the picture above) pioneered in the new diesel's use.



economics and return on investment of replacing all steam power with diesel electric equipment. A return on investment of upwards of 30 per cent per year could be shown in comparison with steam operation.

Then, the idea of an economic study was brand new. Today, it is a commonly accepted technique for marketing all sorts of industrial products.

The following table shows clearly how successfully this technique worked:

	Locomotives in service	
	Steam	Diesel
1965	89	29,552
1955	6,266	26,563
1945	41,018	4,301
1935	48,477	130

Today, there are fewer than 60 steam locomotives left in the United States, and virtually all of them are maintained only for their historic value.

Some 30,000 diesel engines are hauling more than 1.5 billion ton miles of freight a year over the nation's rail lines. And General Motors' Electro-Motive Division has become the world's leading supplier of locomotives.

END

How Millions Were Tied to the "Cord of the Future"



By
Russell DeYoung
*Chairman of the Board
Goodyear Tire & Rubber Co.*

Past decisions tend to be recalled as "major" if they produced outstanding results; "minor" if the results were less than anticipated. Such is human nature.

So in looking back over Goodyear's business decisions for outstanding ones, we tried not to measure with the rule of rationalization.

However, the decisions which led to the development, production and marketing of the Polyglas tire fit the definition of major, both before and after the fact.

Two years after our bias-belted, polyester and fiber glass tire was first sent to market, this new construction is rapidly superseding all other types of auto tires.

Many decisions were involved in this achievement, all interrelated and all contributing to the whole. Of these, two required major outlays in capital and willingness to commit ourselves to a new product course.

The first dates back 10 years to a \$5 million investment in a huge machine to process polyester fabric for use in tires. The second and far more costly one was for equipment to convert tire building machines from con-

ventional bias-ply to bias-belted Polyglas production.

Preceding the first major decision were a good many years of research, engineering studies and development work. Goodyear, in fact, had started evaluating polyester as a potential tire cord material more than a decade earlier; and our initial tire testing took place in 1952.

But the trouble was that polyester, for all its desirable characteristics favoring its use as a tire cord, had one big drawback: Conventional systems used to make tire cord adhere to rubber didn't work with polyester. So a new adhesive system had to be devised. Our chemists and engineers set to work on the project.

Early in 1959, our tire development department reported that such a system had been perfected. It was a modification of the company's long-used 3-T method of readying a textile for use in a tire. During this process an adhesive is applied and the fabric is treated under controlled conditions of time, temperature and tension.

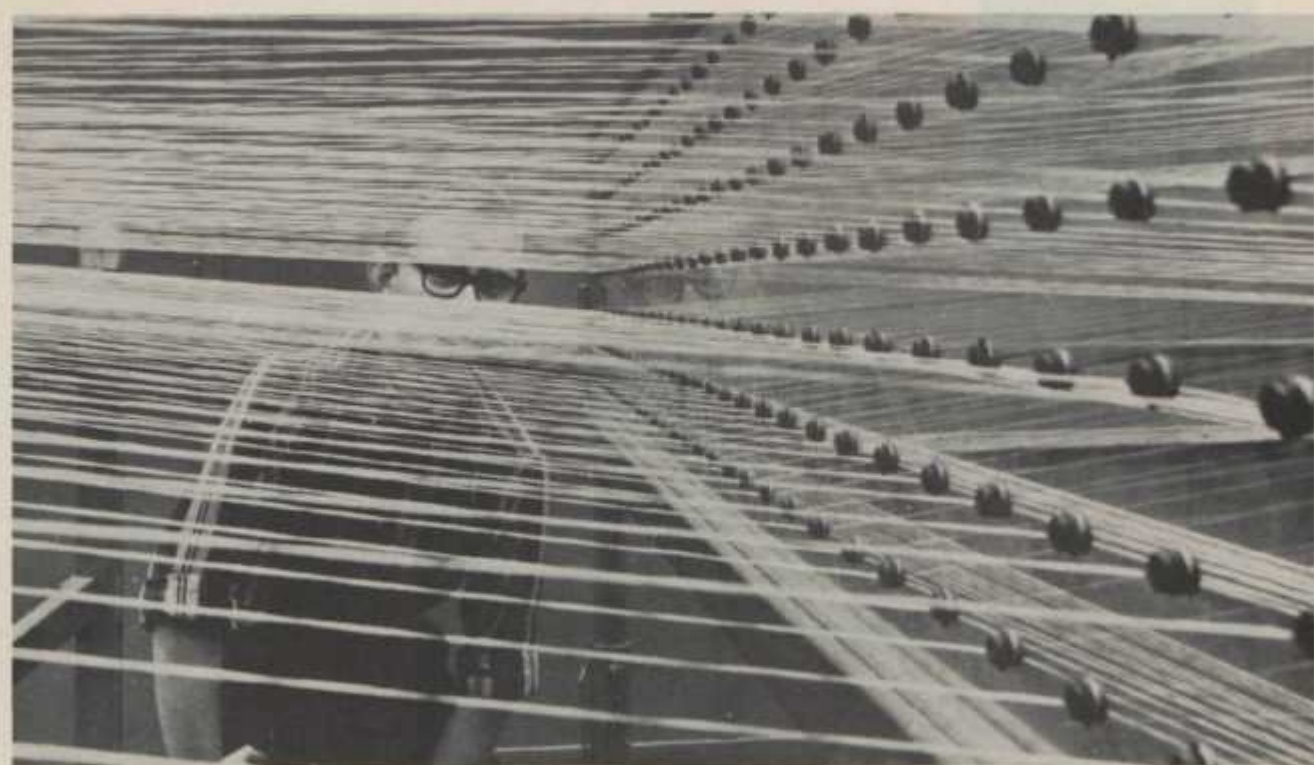
Reviewing polyester's superiority over other fibers—nylon and rayon—used in tire-making, and studying re-

search and engineering reports on the proposed new 3-T machine, we decided to take the leap. The project was approved that would commit Goodyear to the use of polyester as the "tire cord of the future."

Testing of the new cord was intensified—in our laboratories and in tires which accumulated millions of miles on wheels of our test fleet. And we began designing and installing the machinery needed to achieve volume production of tires made with polyester cord.

The first polyester tires were introduced commercially in 1962 in our premium Double Eagle line. Subsequently, polyester use was extended to other passenger tire lines, including tires accepted by domestic auto manufacturers for use as original equipment on new cars. These polyester tires were of the "conventional" bias-ply construction that had been used by tire makers for many years. Plies of fabric crisscrossed the tire center line at an acute angle.

Another type of tire construction, exploited chiefly in Europe, is what is known as radial-ply. In this tire, one or more plies of fabric are laid with



The decision to develop, produce and market the Polyglas tire is looked upon at Goodyear Tire & Rubber as one of the most momentous in company history. At Point Pleasant, W. Va., polyester yarn is constantly under careful inspection.

the cords running at right angle to the tire center line, and a belt of fabric extends around the tire directly under the tread rubber.

The belt prevents tire squirm, so tread wear and tire traction are improved. But the tire rides more harshly than does a bias-ply tire; hence it has not been popular in the United States, where more emphasis is on the "soft ride" in cars.

Tire engineers conceived the idea of combining a bias-ply carcass with a circumferential belt, figuring that this construction might retain the major advantages of the other two.

The only difficulty was that the fibers used for the carcass plies didn't work well in the belt; a fiber with entirely different qualities was needed.

Goodyear found these qualities in fiber glass. Drawing on experience dating back to the mid-1930's, and on active research carried on through the two succeeding decades, our tire technicians found that a tire combining this fiber-glass belting with a polyester cord carcass produced a tire superior to one made with any other type or combination of fibers.

In 1966, they reported their rec-

ommendation that we go into production on the bias-belted Polyglas tire. This tire, the engineers said, could deliver much more tread life than a comparable bias-ply tire while also improving traction and stability with only minimum decline in riding characteristics.

This decision was even tougher than the one that had faced us seven years earlier. This time we would be pioneering an entirely new tire construction—one that we would have to sell to motorists, and to Detroit. And of course, tire-making equipment at our various plants would have to be modified at a cost of many millions.

If our Polyglas tire were all our development department said it was, we would be offering motorists a product superior to any contemporary tire.

The go-ahead was given, and on Nov. 21, 1967, the first Polyglas tire was announced. It was of wide-tread construction, to fit the needs of the increasingly popular sporty cars. Other types of Polyglas tire followed, almost as rapidly as tire-building machines could be modified to make them. By spring of 1968, all four domestic auto makers had adopted Polyglas tires as

original equipment. And with the introduction of 1970 model autos this past fall, virtually every make of car is coming equipped with tires embodying the bias-belted construction principle.

Having swept the original equipment market, bias-belted tires now are rapidly superseding conventional bias-ply tires in the replacement market. In fact, we believe the bias-ply tire's share of this market will drop from 77 per cent in 1969 to 45 per cent in 1970, while bias-belted tires will move up from 20 per cent this past year to 52 per cent in the year ahead. The remainder in both years will be radial-ply tires.

Thus, in a matter of eight years, polyester has surpassed rayon as a tire cord material and is making large inroads on nylon. And polyester and fiber-glass bias-belted tires, in two years, have taken over the automotive original equipment market and are on the verge of dominating the replacement market.

The decisions involved, at this point in time, would appear to have been perfectly obvious and simple. They didn't seem so at the time. **END**

A Poker Game Where Talk Was the Payoff



By
E. D. Brockett
*Chairman of the Board
Gulf Oil Corp.*

In the early years of the oil industry, individual fortunes often were made or lost on the turn of a card. A poker game on board a ship bound for Maracaibo, though, meant a lot not just to individuals but to a major company. That game has become a part of the history of Gulf Oil Corp.'s success in Venezuela. And not because of the cards that fell that night—but because of the conversation.

Gulf Oil could hardly have been called an international oil company in the early 1920's. It was searching earnestly for likely sites in South America. William T. Wallace, vice president of South American Gulf Oil Co., was particularly interested in Venezuela because the 1922 revision of that country's petroleum laws had made it much more attractive to foreign investment. When, on Dec. 14, 1922, another firm—a competitor—brought in a dramatic gusher on the shore of Lake Maracaibo, South American Gulf moved fast.

By February of 1923 a four-man team was en route to Maracaibo while concessions were being negotiated in

New York with representatives of the Venezuelan owners. The team included a tanker man, a civil engineer and two geologists. One of the geologists was C. M. Crebbs, who was to become the president of Venezuelan Gulf and its successor, Mene Grande Oil Co., a wholly owned Gulf subsidiary.

Aboard ship Mr. Crebbs became acquainted over a poker game with a retired sea captain. The captain was exporting goat guano (fertilizer) from the State of Falcon and he knew well the buttonhook-like Paraguaná Peninsula which seemed a good site for a deep-water ocean terminal. (Such a terminal was essential for handling Lake Maracaibo oil production, which had to be delivered to a port on the Gulf by shallow-draft lake tankers, due to a sandbar blocking the lake entrance.) The knowledgeable and amiable captain advised the Gulf foursome of a likely point in that desolate area.

Landing in Maracaibo, the Gulf crew crossed the mouth of Lake Maracaibo by launch, and proceeded to Coro, the state capital. Then a

day's drive through the sands of the peninsula took them northward to the coast and Las Piedras—and the captain's proposed site.

After a quick study it was agreed that the site satisfied all the company's requirements for a deep-water terminal.

With that initial good luck, what was needed next was organization, know-how, equipment and oil. It all came.

From Port Arthur came a sailing vessel replete with timbers, pile driver and labor crew to construct a deep-water loading dock and storage tanks. Driving piles from the ship's deck was attempted first, the plan being that the crew could live aboard ship and work towards the desolate shore. But the water depth thwarted true placement of the piles, so the task was pursued more conventionally from the shoreline seaward 3,500 feet out into the Gulf of Venezuela.

Then came the oil. Mene Grande's first commercial producer, Superior No. 1, came in on Aug. 31, 1924, flowing 2,000 barrels a day from a



Information which stemmed from a card game led Gulf Oil to this location for a Paraguana Peninsula terminal for tankers hauling the rich product of Lake Maracaibo. (The photo, which shows the SS Cabimas tied up at the terminal, was made in 1925.) Soon, the lake looked like what you see below.

sand formation at 1,887 feet. Four months later the company had two more producers. Tankage at Cabimas filled to the brim with crude oil, just as the first lake tanker arrived—excellent timing.

Other producers followed quickly over the next three years and Mene Grande Oil Co. was in business to stay. By 1929 there were 247 wells producing 38,500,000 barrels annually. Mene Grande, now the third largest oil company in Venezuela, has been a significant influence in shaping the industry which has done much to bring prosperity and progress to that nation. Its creation was also a significant stride toward making Gulf Oil Corp. a leading international oil company.

Poker games notwithstanding, the story of Mene Grande's success is not really one of luck. It is one of know-how, organization, employees, equipment, management and men who got it all started by taking a ride into the unknown. When men of this kind are befriended by Lady Luck, big things begin to happen. END



One Man's Theory Opens a New Door

By

R. W. Gillman

Vice President

Hoover Worldwide Corp.

The Hoover Co. might have remained a small, respected manufacturer and marketer of vacuum cleaners in North Canton, Ohio. Instead, it has become an international organization making a wide range of household appliances in 12 countries, selling them in more than 100 and constantly seeking new ways to expand.

Although many men and women have had a share in this over the years, much of the credit for the achievement belongs to the broad-shouldered young Norwegian who joined the company as a service salesman in Green Bay, Wisc., 40 years ago, and is now its president and chairman—Felix Norman Mansager.

Felix Mansager guided the company through the rapids of a momentous transition—the shift from selling a single product, the vacuum cleaner, basically door-to-door, to selling more than a score of products through dealers.

To say he had a dream is perhaps being too poetic. Call it a theory that evolved into a plan that gave the company global stature.

To say the decision to change over came sharply and suddenly is being overdramatic. The move took form gradually, as do many important alterations in corporate concept and policy.

From birth in 1908, The Hoover Co. had worked closely with dealers. Early advertisements, notably in the

now-defunct *Saturday Evening Post*, directed prospects to them. Company salesmen furnished them leads. Every sale, in effect, was a dealer sale. But Hoover management placed top reliance for increased sales upon those who rang the doorbells. They were the men hired and trained by the company. They were the men who fully understood the product and thoroughly believed in it. They had incentive instilled in them.

Felix Mansager went to Sioux Falls, S. Dak., not far from his home in Colton, as a door-to-door salesman in 1935. During the Forties he was district manager there. Somewhere along this passage of time the dream, or the theory, began to take clearer shape.

The young manager said to himself: "My men and I can call on just so many housewives a day; at least three or four times that number will visit dealer stores in town; if the dealers understood the product as we do, they could help us sell; what they need for that understanding is training."

Slowly the theory was put into practice. Dealer meetings were held whenever possible. The dealers were shown through training how to sell a product in the home or in the store. They were persuaded to place orders for cleaners and actively display and promote them. They were told Hoover men would help in every way they could. The results were fantastic.

In 1950 the home office sent Mr.

Mansager to Milwaukee as district manager. He requested permission to do as he had done in Sioux Falls: Meet with dealers and train them when not making sales rounds of his own.

Some of his managers were openly skeptical. A few recalled that dealers had returned their stocks to North Canton when a minor depression ensued just after World War I. The Doubting Thomases thought this could—and probably would—happen again. Furthermore, they argued, Milwaukee was a whole lot larger and more sophisticated. Who knew whether big city dealers would be as responsive? But Mr. Mansager persisted and finally got the permission he needed for this more exacting test. His theory proved successful again—and when he went to Chicago as division manager three years later, it proved successful once more but on a larger scale.

The changing times were on his side, too. Young men were showing less interest in door-to-door sales employment. Turnover in the sales force was cresting at a height of 600 per cent. The company's management had to spend more and more time training new salesmen. Commissions had to be increased to get them interested at all. Rising costs were adversely affecting product price.

Except for smaller items that can be easily brought to the door, house-to-house canvassing was growing less



For years, Hoover salesmen have been taught by demonstration how not to lose a sale. The company lists these steps — attention, interest, conviction, desire and "the close." Hoover must have something; it sells in 100-plus countries.

popular—and less profitable. It was getting harder to find housewives at home in a buying mood. The lady of the house was more likely out patronizing the shopping center. Or visiting a dealer's store, after television, radio, magazine and newspaper advertising had called attention to the attractive offerings she might find there. She was growing accustomed to buying away from home.

Steadily the Dealer Plan gained ground. The dealer was becoming the sole point of sale throughout the U. S. Trained and assisted by the company, he and his staff were not only selling more cleaners than had ever been sold before, but they were

now prepared to handle increasing numbers of products wearing the red circle of quality. Diversification Day for the company was not far off.

When Felix Mansager became general sales manager at North Canton in 1959, he found some faint stirrings of diversification. Hoover had started making a few irons and some floor polishers. These were being marketed to distributors by a special products department, quite apart from the sales effort expended on the cleaner. Now they were all placed under one roof, so to speak, and the campaign for diversification began in earnest. To cite one measure of the success of the change, the recently completed

warehouse close by the main plant currently handles 35 products and 150 models.

In 1963, when he was made executive vice president of the Hoover Group, Mr. Mansager installed the plan first in the United Kingdom and then in all the other company-related factories and offices around the world. It is now flourishing universally.

A final assessment of this attainment and its architect seems fitting:

In the six years since 1963, the company's consolidated sales worldwide rose from \$241,802,548 to what was expected to be over \$300 million in 1969, while its U. S. sales more than doubled. **END**

Fighting for Bold Ideas



By
Charles K. Cox
*President and Chief Executive Officer
Insurance Co. of North America*

On the eve of World War II, top management of the Insurance Co. of North America came to a decision that it would campaign as strenuously as possible to obtain the right to issue multiple-line insurance policies.

It sounds like a minor, technical matter, but it wasn't. To win that right, INA "led a long fight to liberalize state laws," as *Newsweek* later recalled.

The beneficial effects of that successful struggle are being felt, even today, by every homeowner and millions of apartment dwellers, and throughout the broad range of U. S. industry.

Within the insurance industry, the decision ultimately caused revolutionary changes to take place.

And INA, as a direct result, opened up vast new markets and thus grew at a faster rate than the rest of the industry—faster than even the over-all national economy during days of snowballing prosperity.

The story begins in the latter part of the Nineteenth Century, when the increasing industrialization of our society gave rise to casualty insurance. Because of a complex network of state laws and industry self-policing regulations, fire and marine insurance companies could not write casualty insur-

ance, so many of them, including INA, set up casualty subsidiaries.

But this burdened the policyholder with paying the administrative expenses of two companies instead of one. Moreover, policyholders ran the risk of "falling between two stools" and failing to protect something of value. Finally, the rigid barriers separating the various lines of insurance tended to make the industry inflexible, slow to respond to the needs of the public.

That was the state of affairs in 1939, when Benjamin Rush, on the eve of his retirement as president of INA, told the company's executives that the artificial restrictions were intolerable and should be removed.

Standpatters in the industry, he said, "will tell you . . . that it cannot be done in America, and this in the face of the fact, which they know, that it has been done successfully in Great Britain for more than 40 years. In Great Britain you can cover most of the hazards that are covered by fire insurance, inland marine insurance and casualty insurance in one document. . . . Think how convenient this would be to the average policyholder."

INA executives began a campaign of persuasion. In 1942 John A. Diemand, the new president of the com-

pany, issued its first public call for change. The following year, the National Association of Insurance Commissioners appointed him to head a blue-ribbon committee, representing every part of the insurance business and the insurance-buying public, to study the matter.

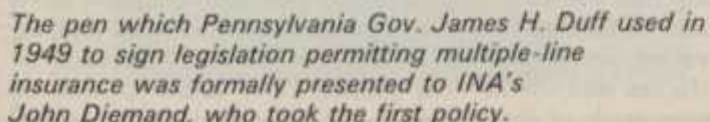
The committee subsequently recommended that underwriters be given the power in the U. S. to write comprehensive automobile and aviation policies, and personal property floaters.

Some states and some elements in the industry fought the proposal, but progressive industry leaders and insurance commissioners rallied to the cause.

The multiple-line era really began in 1949, after the Pennsylvania legislature passed an enabling act, when INA issued its first all-embracing automobile policy—to John A. Diemand, of course. Mr. Rush was no longer alive.

From the first, the company had aimed at a policy tailor-made for householders. Finally, in the fall of 1950, Pennsylvania became the first state to approve the Homeowners policy, designed by INA to include at least nine different coverages in one package. "Revolutionary" was one tag applied to INA's innovation, and

In the 177-year history of INA, few decisions have ever had such far-reaching consequences. **END**



A Mountain That Became the "Richest Hole on Earth"



By
Frank R. Milliken
President
Kennecott Copper Corp.

At the turn of this century, in the barren wastelands of Utah, there stood a mountain of copper—and nobody wanted to buy it! The reason was simple: The ore was of such low grade that it couldn't be mined profitably. But the vision of that buried treasure haunted the mind of one man, Daniel Cowan Jackling. And he lived to see the mountain become the richest hole on earth.

A farm boy, born Aug. 14, 1869, who was orphaned before the age of two, Mr. Jackling learned hardship early in life. But tough work and a quick mind got him through the Missouri School of Mines. Soon he was off to apply his studies as a miner, mill hand, assayer and metallurgist at camps in Utah and Colorado. One day in the late 1890's, he was asked to conduct tests at Bingham Canyon in the Oquirrh Mountains of Utah, overlooking the Valley of the Great Salt Lake. He reported that here was a veritable mountain of ore containing 2 per cent copper.

Nobody was interested. At that time, mines which did not yield at least 10 per cent copper were abandoned as unprofitable. So for all its hidden wealth, Mr. Jackling's moun-

tain was regarded as a heap of dross. Over the next few years, to all who would listen, he argued that radical techniques of mining and milling would make this land yield immense rewards.

Except for those who owned an interest in the property but lacked the capital to work it, the reactions ranged from skeptical to derisive. Had not the prestigious *Engineering and Mining Journal* declared that "it would be impossible to mine and treat ores carrying 2 per cent or less of copper at a profit. . . .?"

Still he persisted and, in 1903, he persuaded two investors to put up the money needed to buy a majority interest in the Bingham property. To mark the occasion, which heralded a new era in mining, he dipped into his last \$100 for a big celebration dinner.

Mr. Jackling's concepts were revolutionary and cast on a gigantic scale.

He proposed to inaugurate open-cut mining, with huge steam shovels scooping up the ore and carving great circular terraces deep into the earth. Railroad tracks would be laid within the mine as excavation progressed, and the track for the ore cars would continue along a steep grade of dan-

gerous curves for another 15 miles to a point where the water supply was adequate.

Here millions of dollars would be expended for concentrating, smelting, refining and other facilities that could economically handle unprecedented quantities of ore.

In short, even before Henry Ford brought it to the assembly line, Mr. Jackling nurtured the dream of mass production.

A big, tough, blunt-spoken man, he had a supreme confidence in himself that inspired the confidence of others. Not only did this brilliant engineer take the lead in overcoming staggering operational problems, but he played an instrumental role in bringing various mining companies together into one corporate entity, Kennecott Copper Corp.

Since he first ventured into the Oquirrh Mountains, the Bingham Canyon mine has become the largest excavation on the face of the planet—an industrial Grand Canyon. Over 1.77 billion tons of overburden have been removed, equivalent to digging 177.5 Panama Canals. The property has yielded 18.77 billion pounds of copper which, at today's prices,



Daniel Cowan Jackling stands in perpetuity in the Rotunda of the Capitol in Salt Lake City. But his real monument is a gigantic hole in the earth where a mountain once stood in Utah. Sixty years ago, Mr. Jackling, who helped form Kennecott Copper, was digging this industrial Grand Canyon, spiraling railway tracks into the pit and using huge steam shovels at the bottom. He was the inaugurator of assembly line mining.



would represent a value of \$8.82 billion.

In addition, it has produced 372.8 million pounds of molybdenum, 91.3 million ounces of silver and 11.1 million ounces of gold.

As the old bonanza mines played out and new ones were not discovered, the copper industry turned more and more to the mass production techniques pioneered by Mr. Jackling. They spread to Nevada, Arizona, New Mexico and the far reaches of the globe. Today the demand for copper is growing at an astounding rate and it has found a variety of uses that not even Mr. Jackling could have foreseen. Yet, the awesome supplies of this essential metal are provided by mines that have an average copper content of less than 1 per cent—a fact that few men would once have imagined, but that one man dared to believe possible.

We now know that Mr. Jackling did much more than begin digging the richest hole on earth. By the vision he held and the persistence with which he followed it, he immeasurably enriched the material condition of mankind. **END**

Key to Success: a Scrub Pail



By
Bert S. Cross
*Chairman of the Board and Chief
Executive Officer
The 3M Co.*

For the struggling, young sandpaper company, it was a crisis of life-or-death proportions—a crisis spawned in a storm at sea and solved in a scrub pail.

Twelve years after its founding, Minnesota Mining and Manufacturing Co. had just reached the point in 1914 where it was gaining a precarious foothold in the highly competitive coated abrasives industry.

Then came a cloudburst of customer complaints. The garnet, an abrasive grit, was falling off our sandpaper; not just a batch or two—all of it. Sales declined and repeat orders became almost impossible to get.

The newly won and hard-earned reputation of 3M was at stake.

All the efforts of production personnel to find the answer and correct the problem were fruitless.

Then one day a worker, unknown to us today, noticed an oily film on water standing in a scrub pail. At the bottom of the pail were bits of garnet

mineral that had been mopped up from the floor.

He summoned the plant superintendent, and both pondered the discovery. The superintendent then realized that the garnet somehow had been contaminated with oil, which made it impossible for the grit to stick to adhesive on the sandpaper backing.

With no success, foremen combed through the production process to pinpoint the contamination source. Railroads, supply houses in New York and shipping lines were checked out. No luck.

Finally, the garnet was traced all the way back to its origination point in Spain.

There the answer was found. Months before, a Spanish steamer had sailed for America with a cargo of olive oil. It was ballasted with sacks of garnet consigned to 3M. A storm broke in the Atlantic and as the ship pitched and rolled, several olive oil casks ruptured and saturated the

garnet. It was a traumatic and almost fatal experience for 3M. But out of it grew a keen awareness of the need for a system that would insure greater control over raw materials, control that would guarantee product quality and uniformity.

The decision was made to organize a small laboratory. At a cost of \$500—a princely sum for 3M in those days—our first laboratory came into existence.

It was a closetlike, five-by-seven-foot room with rough, unpainted walls. In no way did this room fit the modern concept of a research facility. But it was the modest start of a research and development organization which today has grown to 50 laboratories manned by more than 2,000 technical personnel.

That \$500 research investment in 1914 compares with \$63 million last year for 3M Co. research and development.

The original laboratory mastered our quality control problems of



It took something more than salesmen and excellent executives to take the 3M Co. from tiny to titanic size. There had to be good products, and laboratories are where many a product is spawned. Here are eight of 3M's nine lab workers in 1924. Today, the company has 50 labs throughout the world, staffed by 2,000 technical and scientific workers.

that day and age. Through the years it expanded into new areas: Product improvement, new product development and, indeed, whole new technologies which transformed a struggling, young sandpaper company into the diversified 3M of today—\$1.4 billion in sales and 35,000 products in 45 major product lines.

These laboratories have given the world the internationally known lines of "Scotch" brand pressure-sensitive tapes, audio and video magnetic recording tapes, presensitized lithographic printing plates, reflective license plates and highway directional signs, dry process office copying machines, synthetic race tracks and football fields and much more.

Yet despite its size, 3M continues to strike out boldly with imagination and an open mind. Our problems are of a much more sophisticated nature now. But if we think we can solve any of them by studying a scrub pail full of water, that's what you'll find us doing.

END

Self-Service Rings Up a Billion Dollar Sale



By
Robert S. Oelman
*Chairman
The National Cash Register Co.*

An idea born in Memphis more than 50 years ago revolutionized the world's shopping habits—and also helped start The National Cash Register Co. along the road to becoming a billion dollar corporation.

The idea was self-service merchandising. It was the inspiration of Clarence Saunders, a Memphis businessman who founded the Piggly Wiggly food store chain. Like many great ideas, it was amazingly simple: Let the customer get close to the merchandise, pick up it up and examine it carefully. Give "impulse buying" a chance to come into play and volume would increase dramatically.

There were many skeptics. Some said pilfering losses would be staggering. Others claimed the customer never would be willing to serve himself.

However, NCR concluded that Piggly Wiggly was only the beginning, that customers instead of resenting self-service would like a system in which they could shop at their own pace.

Furthermore, the time was right. The typical American family now

had a car in which to haul purchases home. Refrigeration permitted bulk purchases of perishable items. The daily trip to the corner grocery and meat market would soon no longer be necessary. Fewer but much larger food stores were clearly the wave of the future.

How would all this affect a cash register company which for half a century had looked to the small neighborhood store for most of its business? It could have been disastrous, but instead it provided the impetus for a dramatic new period of growth. At the same time it launched NCR on a product development course and a broader concept of marketing which eventually enabled a relatively small company to become the world's second largest producer of business equipment.

As for product development, it was obvious what self-service demanded: An itemizing sales register completely electrified for fast checkout operation. It had to be more rugged than any yet produced in order to endure almost constant operation.

But the engineering of new equip-

ment was only a small part of the challenge. Prior to the birth of self-service, NCR had tailored cash registers and other business machines to mechanize accounting functions. But we had scarcely touched upon such matters as how and where a merchant should display his merchandise, how customers should be routed through the store, and similar operational problems. We had done much toward "organizing the books" but hadn't yet attempted what the industrial engineer calls "organizing the work."

It soon became apparent that the self-service development would require NCR to do much more than merely market machines. Henceforth we would be promoting new merchandising techniques as well as equipment.

So parallel to development of the early checkout registers, we specialized in store organization. We set up what was then known as a Merchants Service Department. An extensive library of merchandising literature was developed. Using miniature models of store fixtures, NCR specialists



Clarence Saunders, a Memphis businessman, founded the Piggly Wiggly food stores, giving National Cash Register Co. its big break. Piggly Wiggly started self-service food merchandising, creating the supermarket and showing need for a fast, tough, itemizing cash register. NCR, which produced these models in the 1920's, is a billion-dollar-a-year company today.

designed thousands of store layouts for merchants. Strategic placement of merchandise, traffic patterns and many other factors were analyzed scientifically. Training manuals and schools were developed for checkout personnel.

This broader marketing concept also made the company more systems-conscious.

Greater emphasis was placed on researching the needs of different lines of business and developing specific systems to meet those needs. This service-oriented approach permeated practically all areas of corporate activity and, much later, helped pave the way for our meeting the unprecedented systems challenges of the computer era.

What eventually evolved was a "total system" philosophy which one day would enable not only sales registers but other basic business machines to communicate with computers.

Following World War II, NCR's pioneering efforts in self-service mass merchandising spread to Europe, Latin America and Asia. The company developed seminars on "Modern Merchandising Methods" and "Advanced Management Systems" which attracted tens of thousands of foreign participants.

These programs presented new management concepts in practically every field of business.

Today's checkout registers are, of course, vastly different from the ma-

chines used in the first Piggly Wiggly stores. They provide automatic change computation and change dispensing, automatic enforcement of check endorsement, separate totals for refunds and coupons, and an auto-cycle capability by which many different categories of transaction data can be totaled separately at any point in the day's business in order to analyze department activity and thus schedule labor more effectively.

Although NCR's innovative founder, John H. Patterson, died before self-service stores became widespread, it is interesting to note that this development—perhaps more than any other—demonstrated the validity of his favorite NCR dictum: "We progress through change." **END**

GREAT
MOMENTS
AND GREAT
MEN OF
AMERICAN
BUSINESS

NEW YORK
LIFE

A Willingness to Innovate



By
Charles W. V. Meares
*Chairman of the Board
New York Life Insurance Co.*

Singling out one development that changed the course of New York Life is no simple matter.

During its 125 years, the company has made many notable contributions to the life insurance business through its willingness to innovate.

New York Life, for example, was the first to originate policies with paid-up values. Before this, lapsed life insurance policies returned nothing to the insured. New York Life was also the first freely to accept women for insurance at the same rates as men; the first to issue policies to people with impaired health and to those who worked in hazardous occupations; the first to publish a detailed financial report for its policyowners and the public.

These are but a few of the company's benchmarks of continuing progress. One more, perhaps the most far-reaching innovation in the changing life of New York Life, was a new system of compensation for agents. It was not only revolutionary in its day, 75 years ago, but remains unique in the life insurance business. And it has enabled the company to build a loyal, professionally trained corps of full-time career agents, better able to serve the lifetime financial security

needs of our policyowners. And this, after all, is what the life insurance business is all about.

By 1895, the relatively young life insurance industry was thriving. Sales in that year topped the \$1 billion mark and insurance in force was at an all-time high of \$5.7 billion.

But there were serious selling and service gaps in the industry growing out of the fact that agents worked mostly on a part-time basis and were quick to jump from one company to another.

For the policyowner, this resulted in constant disruption of service; for the company it meant erratic sales performance. For everyone concerned, the practice was costly and wasteful.

The problems were there for all companies to see. But only New York Life took the lead. Spurred on by George W. Perkins, its resourceful vice president in charge of agency affairs, New York Life in 1895 approved a farsighted agents' compensation plan with benefits never before proposed in the life insurance industry.

New York Life agents were provided regular compensation and a lifetime monthly income after 20

years if they maintained specific sales results over that period. This monthly income accrued to an agent even though he had not retired from the company.

The Nylic (an acronym of the company name) Plan's elements of deferred compensation and old-age security were rare for any industry in 1895 and unprecedented in the life insurance business.

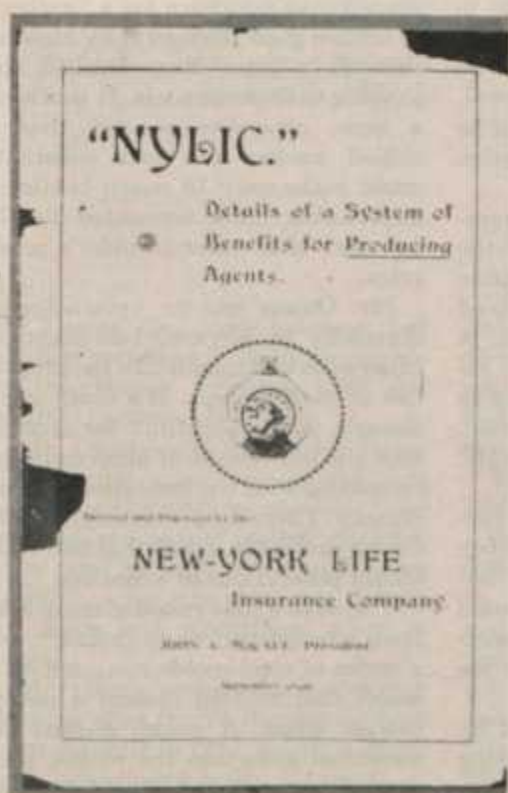
A year after the plan was started, only 73 New York Life agents qualified. Within 10 years the membership was over 1,100. Today, the company has more than 8,000 full-time career agents. In 1968, Nylic benefits to agents, exclusive of commissions, came to a record \$18.6 million, an increase of almost 28 per cent over five years ago.

Has this life insurance industry "first" been an important and significant factor in New York Life's development? We think so. It has enabled the company to build and retain one of the finest groups of professionally trained, service-oriented agents anywhere. And this emphasis on service-selling remains the hallmark of New York Life's steady growth and progress for today and the years ahead.



A milestone in the history of New York Life was a pioneering plan for compensating "producing" agents, as detailed in the booklet at left. George W. Perkins, above, vice president for agency affairs in 1895, spurred the move to stabilize the company's sales and service force. Agents had mostly worked part-time and turnover was quite a problem. New York Life now has more than 8,000 full-time agents.

END



An Improbable Genius Was Mike Owens



By
Raymon H. Mulford
*Chairman of the Board
and Chief Executive Officer
Owens-Illinois, Inc.*

He left school when he was 10 years old and never learned to read a blueprint or master the decimal system. He always was confounded by the size and complexity of machines that were evolved from his ideas. Yet Michael J. Owens revolutionized the glass industry with inventions that were the first technical advances made in 2,200 years.

Mr. Owens was as improbable a genius as Thomas A. Edison, who was remarkably like him in training and temperament. He had no concept of scientific theory. When engineers showed him detailed designs of machinery based on his rough sketches, he snapped impatiently, "Put it in iron." His brusque manner antagonized some, but his dynamic innovations transformed the ancient art of glassblowing from a handicraft to an automated, mass-production operation in 1903.

The strangest paradox of Mr. Owens' career was his relationship with Edward Drummond Libbey, a polished and diplomatic glass manufacturer who was his chief supporter despite a damaging strike Mr. Owens

had led against him. Mr. Owens, the son of an Irish immigrant coal miner, left school after the fifth grade in 1869 to stoke furnaces in a glass factory at Wheeling, W. Va., for 30 cents a day.

At 15 he was a glassblower, but he had a more formidable local reputation as a union leader.

A forceful, if somewhat ungrammatical speaker, he was one of the agitators sent to foment a strike against Mr. Libbey's New England Glass Co. at Cambridge, Mass., in 1888. The dispute was partially responsible for Mr. Libbey moving to Toledo and its cheaper sources of fuel. Among the new men he hired was Mr. Owens.

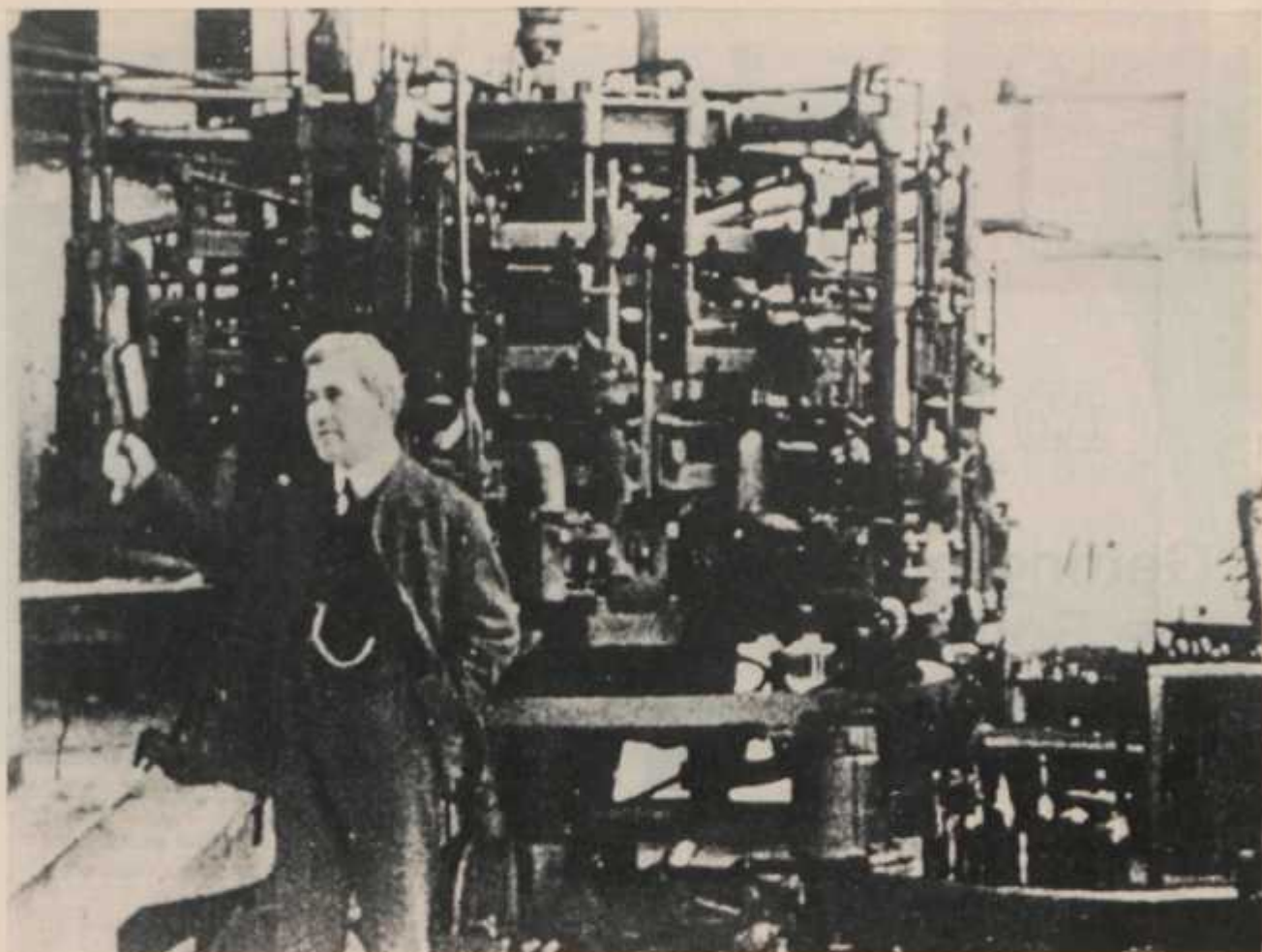
Three months later the young firebrand had bombarded Mr. Libbey with so many suggestions for improvements that he was appointed foreman of the glassblowing department. Within two years he was the superintendent of the plant.

In 1898, with funds furnished by Mr. Libbey, he began experimenting with a machine to produce glass bottles and tumblers, which had been

made by hand ever since glass was discovered by the Phoenicians. Men dipped into a furnace for a "gather" of molten glass, formed it by blowing through a pipe, then finished the shaping with crude tools. It was such a slow, expensive process that a skilled worker and four assistants could make only 18 dozen bottles a day. Labor costs accounted for 75 per cent of a water tumbler's retail price.

Mr. Owens had no knowledge of chemistry or physics, but practical experience had taught him the properties of molten glass. His chief asset, though, was an instinct for sensing how the limitations of glass could be reconciled with the limitations of machinery. There is no other explanation for his success in a field that had frustrated generations of scientists.

The device that raised glassmaking from a handicraft to an industry was a series of steel molds mounted on a wheel that rotated around a pot of molten glass. A pump sucked up measured gobs into the molds, then wafted a precise puff of air into them to shape the glass. Skeptics dismissed



Here are man and machine which helped make Owens-Illinois. Michael J. Owens' automatic bottle-making machine was the first major development in glass-making since the blowpipe came into use 2,200 years ago. Furthermore, it was one of the most complex machines mankind had ever seen when it first appeared in 1903. Mr. Owens here is standing in front of the 1910 model.

Mr. Owens' first crude machine, but he soon perfected it. Today's models of the Owens machine turn out 300,000 bottles a day.

Mr. Owens next turned his attention to flat glass, which still was hand-made by workers who blew huge bubbles into beds of molten material, then tried to level the lumps. More often than not, the glass was marred by flaws and distortions when it cooled.

Mr. Owens perfected a system for drawing glass from a furnace in sheet form. As early as 1917, he, Mr. Libbey and associates built a plant at Charleston, W. Va., that was com-

pletely automated—from the introduction of raw materials to the emergence of a continuous sheet of glass from the annealing oven, ready for cutting.

That plant is still operated by the Libbey-Owens-Ford Co.

Colleagues constantly were alienated by Mr. Owens' abrasive personality. Mr. Libbey was embroiled in most of the conflicts, but he recognized the truculent Irishman's unique talents and authorized the then unprecedented sum of \$4 million for his experiments over a 20-year period. This year Owens-Illinois—successor to Owens Bottle Co., formed in 1903

to make Mr. Owens' revolutionary bottle-making machine—will spend \$40 million for research and development to maintain the technological leadership and excitement brought to it by Mike Owens.

He died in 1923 and Mr. Libbey in 1925. Four years after Mr. Libbey's death, Owens Bottle merged with the Illinois Glass Co. to form the corporation that is now Owens-Illinois, Inc. With that merger the company acquired the services of two other remarkable men—William E. Levis and J. Preston Levis—cousins who guided the company for more than three decades. **END**

Getting on the Route to Corporate Health



By
William A. Lashley
Vice President
Penn Central Co.

In the mid-1950's, America's railroads faced increasingly serious trouble. The Depression, World War II and Korea, coupled with billions in federal promotion of airways, highways and waterways, had left them in poor physical and financial shape. The crisis was particularly acute in the East, where several railroads were in or near bankruptcy.

One of many railroad officials who sought a solution was Stuart T. Saunders, now chairman of the board of Penn Central, and then vice president and general counsel, and later executive vice president, of the Norfolk & Western Railway Co., at Roanoke, Va. He became a leading advocate of saving the Eastern railroads by realigning them into three competitively balanced systems.

Congress had established voluntary railroad mergers as national transportation policy in 1920, but action had been delayed by the railroad industry's absorption in more immediate programs.

Mr. Saunders became president of the Norfolk & Western in 1958, and shortly afterward won ICC approval of an N&W merger with the Virginian

Railway. This first union of major unaffiliated railroads in the Twentieth Century gave the green light to the entire industry.

Next, the energetic Mr. Saunders laid the groundwork for one of the three major Eastern systems he envisioned. He negotiated agreements to expand the Norfolk & Western system to include the Nickel Plate, Wabash and several other small lines. The case had been presented to the ICC before he left the N&W to become chairman of the Pennsylvania Railroad in October, 1963, and the merger became effective a year later.

Meanwhile, the second and third big Eastern systems were taking shape. In 1962, the Pennsylvania and New York Central filed their application to merge and in 1963, the Chesapeake & Ohio was granted control of the Baltimore & Ohio.

One of the biggest obstacles to approval of the Penn Central merger was opposition to the abolition of some 7,800 jobs when it became effective. Mr. Saunders, with New York Central President Alfred E. Perlman, formulated a plan which guaranteed no one would lose his job due to the

merger. Reductions would be achieved by attrition through retirement, voluntary resignation, reasons of health and other normal causes.

Attrition agreements were negotiated with each of the 24 unions active on the Pennsy and the Central. By the time the Penn Central case had reached the Supreme Court for final decision, the merger was no longer opposed by the Justice Department or by any major city or organization served by the proposed system. The merged system came into being on Feb. 1, 1968.

Since Mr. Saunders set off the railroad merger movement, the ICC has received applications for 48 more unifications. So far, 29 have been approved, nine are pending, six were withdrawn and four denied.

The New Haven Railroad was taken into the Penn Central system in January, 1969, and the stage was set for the East's remaining railroads to affiliate with one or another of the three competitively balanced systems Mr. Saunders envisioned. Competing railroads which opposed the Penn Central merger are attempting to take this evolution a step further and



American railroads are in far better shape now than they have been in many a year, and one of the men most responsible is Stuart T. Saunders of Penn Central. He boosted railway mergers.

leave the East with only two systems—the Penn Central and a merged N&W-C&O-B&O.

Realizing that merger is no panacea for all railroad problems, Mr. Saunders greatly strengthened the Pennsylvania in preparation for the Penn Central merger. He encouraged diversification under the aegis of David C. Bevan, the Pennsy's chief financial officer who is now chairman of Penn Central's finance committee. This highly successful program has made Penn Central not only the nation's largest railroad, but also the largest real estate firm. Its assets of some \$6.5 billion are now almost equally divided between nonrailroad enterprises and railroad plant and equipment.

Advance preparations by both the Pennsylvania and the Central, which had been vigorous competitors for decades, have helped the combined system to ride out the difficult early stages of merger.

Sizable start-up expenses were involved in physical consolidation projects such as new and expanded yards, a system-wide computer network and selection of best operating routes.

These projects, together with early operating problems, had a heavy impact on earnings.

Mr. Saunders and Mr. Perlman ordered this start-up phase expedited as much as possible. Penn Central now expects to achieve complete unification in at least three years less than the eight years originally scheduled.

The gigantic task of implementing the largest merger in American business history has not been easy, but the most difficult part has now been accomplished. Despite the handicaps of regulatory policies, obsolete labor laws and subsidized competition, Penn Central is steering toward success. In the fourth quarter of 1969, merger savings on an annual basis exceeded start-up costs for the first time. Penn Central expects that, from now on, the savings will grow while the expenses will decline.

Mr. Saunders has launched far-reaching programs for modernizing and upgrading equipment, extending computer technology, trimming away the deadwood of little-used branch lines within the 22,000-mile system, developing creative marketing policies and introducing aggressive lead-

ership. Penn Central, operating nearly 40 per cent of the nation's passenger service at a deficit of approximately \$100 million a year, is leading the passenger-carrying railroads' fight to obtain federal funds for underwriting deficits and improving passenger equipment. Only a small fraction of the millions poured annually into highways and airports would be needed by the railroads, and chances are good for enactment of such legislation by the Ninety-first Congress.

Recently, Penn Central became a holding company, which will give it greater freedom to pursue diversification. Encouraged by the success of such acquisitions as Buckeye Pipe Line Co., Great Southwest Corp. and Arvida Corp., the company during 1969 signed agreements to add an oil producer, an oil marketing firm and a mobile and modular home builder to its nonrailroad enterprises.

Realizing Penn Central's vast potential for growth and profitability, and for a constructive role in the national transportation system, is Stuart Saunders' greatest dream. He has gone a long way towards making it come true. **END**

Life Begins at 40 —for a Corporation



By
John O. Nicklis
*Chairman of the Board
Pitney-Bowes, Inc.*

In 1958, Pitney-Bowes was a profitable, one-product-line company enjoying a steady annual increase in business. Gross sales were \$51 million and net profit was rising at a comfortable rate.

By early 1959 the maturing corporation, then approaching its fortieth year, had taken a hard look at its prospects for continued growth—and found both some worries and a new direction.

We had known for some time that our single product line—postage meters and related mailing equipment—left us with all our corporate eggs in a single basket. But good profitability and steady growth had not provided the sense of urgency to get us moving on a more positive course toward diversification. We needed a catalyst, and early in 1959 it came—not from within the organization, but from the outside. It was the consent decree settlement of antitrust charges brought against us because of the gradual lapse of competition in the postage meter field.

Under the decree we were required to give technical information and the

royalty-free use of our patents to qualified competitors. We recognized that the restoration of competition was in the public interest and would probably stimulate the postage meter market as a whole. We felt confident we could meet the competition. At the same time, the existence of the decree underscored our vulnerability as a one-product-line company and brought us face to face with one of the hard facts of corporate life: Diversification, with all its risks, often is essential to dynamic growth, to security and, sometimes, to survival.

Having decided both to grow profitably and to strengthen our position, we began to make plans to move into new fields and to increase our existing business. This aggressive new direction was keynoted at the beginning of our 1959 report to stockholders, which said, "In 1959, Pitney-Bowes accented preparation for the future. . . . New and improved products have been introduced, and more are in development, to enlarge our markets."

Among the first steps we took was establishment of an international

division to coordinate and expand our business outside the United States. Market research studies were made and we worked to strengthen our foreign subsidiaries and dealerships. New facilities and a push on production abroad were also in our plans for the international division. At home, we were just completing a plant expansion and modernization program, and research and development expenditures were boosted by 50 per cent.

All this, we knew, would increase costs substantially, and limit our increase in net profit for some time to come. We were convinced, however, that such steps were fundamental to the acceleration of our growth, and that the investment would pay off. It took a while, but it has indeed paid off—in our improved, now-profitable international operations, and in development and production of new products here and abroad.

Two years later, we took our first big step away from the postage meter and mailing equipment field by acquiring Adrema of West Germany, a leading manufacturer of addressing



When Pitney-Bowes diversified and moved into the foreign field, it did so in a big way. Here, company officials complete the deal for a German firm, Adrema, in 1961.

equipment in Europe. We introduced Adrema products in the United States in 1963. Then, in 1966, we added collating equipment to our product line with the acquisition of Thomas Collators.

Even after these acquisitions, we continued investing substantially in the future. We built a new manufacturing plant for Adrema, a new manufacturing plant for Thomas Collators is currently under construction, and an addition is under way at our British company's plant in Harlow, England.

In 1968, we acquired Monarch Marking Systems of Dayton, Ohio, the leading manufacturer of pre-printed firm-name tickets, tags and labels used in retail price-marking, industrial product identification and in-plant control systems. Monarch also makes machines for imprinting and attaching the tickets, tags and labels.

Later that year, after the acquisition of Malco Plastics, a manufacturer of printed plastic cards for credit and identification systems, we established an information systems division to handle our addresser-printer and

plastic card business. We are working hard to develop this area of our business.

Acquisitions were an important part of the growth and change that reshaped Pitney-Bowes during the 60's, but the greater part of the growth actually came through our own new-product development. In December, 1965, we acquired a license to manufacture an electrostatic office copier.

We developed a prototype and entered the copier market the following year. There were sizable start-up costs for our new copier products division, including a new plant and headquarters. But our copier business recorded an excellent increase in 1968, new models are being introduced and we expect this to become one of our most important and profitable product lines.

Nor, in all the excitement, have we neglected the postage meter. Last year, we brought out a new model developed by our engineers, the Touchmatic postage meter. Aimed primarily at small and medium-sized businesses, this keyboard-operated

model was introduced last year and operates much like the latest telephones, a concept new to the meter.

Pitney-Bowes is now reorganized for still further growth. It has four product-line divisions—mailing equipment, copiers, information systems, Monarch Marking Systems—plus the international division. All product lines are selling well.

Postage meter sales have continued to grow, too, despite the new competition which followed the consent decree.

Revenues in 1968 topped \$220 million, and we expect our gross income to climb at a 15 per cent rate for at least the next five years. We intend to keep on finding new opportunities for growth through product acquisition and development, to expand our existing businesses, and to maintain or even improve our profit margins.

What one 1959 observer called our "competitive spunk" has served us well. As we complete our fiftieth year, the events and decisions of 1959 and the changes they sparked remind us that, even for corporations, life really can begin at 40. **END**

Shooting for the Big Time —and Making It



By
James A. Ryder
*Board Chairman and President
Ryder System, Inc.*

It is my experience that often before one's business takes a big forward jump, makes an important breakthrough, one passes through a period of discontent and frustration. At such times it seems nothing is moving ahead as it should.

I had just turned 39, and was experiencing one of those periods, in the summer of 1952. Our company, then Ryder Truck Rental System, was leasing and renting 1,300 trucks in four Southern states that year. Our revenue was about \$3 million and we had always operated profitably. Our results weren't bad, but I couldn't shake the feeling that we had run out our string.

I'd taken off some time from work in Miami and was holed up in a small cabin in the Carolina mountains when a message came through that shook me out of my mood. The Southeast's largest and most profitable motor carrier, Great Southern Trucking Co., was up for sale.

I knew quite a lot about Great Southern; we leased it some of its pickup and delivery fleet. And I knew its owner, the late L. A. Raulerson.

A much older man than I, he was proud of his reputation as a shrewd trucking operator and dean of his industry in Florida.

A phone call to Mr. Raulerson confirmed my tip and a few days later we met in his office where I learned his terms.

For his truckline, whose 1952 revenues of \$13 million would almost quadruple ours, Mr. Raulerson wanted \$2 million, cash. And he set a hard and fast deadline for getting it: 3 p.m. on Dec. 10 the same year. I told him he had a deal.

When I related the proposition to my partner, Roy Reedy, Roy's reaction was quick and blunt. "I don't think you've a Chinaman's chance of swinging it," he said.

Our total net worth at the time was about half the Great Southern's price, but we had our chance, and I was determined that somehow, we were going to get the company. Mine wasn't a very scientific approach, but you had to start somewhere.

There were many crises for us in the following weeks as we sought to arrange the necessary financing. At

one point, as December neared, it seemed it would be impossible to meet Mr. Raulerson's deadline. Our attorney, now feeling on good terms with the carrier owner, was sure we could get additional time to raise the purchase money. So we went to Jacksonville to make our request to Mr. Raulerson. Lounging in his chair, a long cigar in his hand, the trucker listened sympathetically and patiently as our lawyer made his plea. Then:

"You want more time, do you, Jimmy?" he drawled at me in a soft and kindly way.

"Why, feel absolutely free to take all the time you want—two weeks, a month if necessary."

Then he sat forward in his chair and his voice hardened. "But I've just one thing to say about all this! The date is Dec. 10 and the time is 3 p.m.!"

Our next meeting with Mr. Raulerson was shortly after noon on his deadline day when we filled the trust room of the Florida National Bank of Jacksonville, I with my associates and attorney, he with his, and bank officials acting as agents in the closing



James A. Ryder has steered his Southern truck rental company from small, regional status to national rank.

for us both. Checks, papers and minutes of the two companies were produced and the closing was under way.

By complex financial maneuvering we had been able to borrow enough money to acquire Great Southern.

There was one nerve-racking delay when a check vital to the proceedings was unaccountably misplaced for some minutes. Then the bank president was taken suddenly ill, and we were delayed while a subordinate took his place.

Less than an hour before the deadline, the deal was closed. Mr. Raulerson held a certified check for \$2 million and we had Great Southern.

We'd passed a milestone and entered into a larger, faster league. By multiplying the size of our operation, overnight, we became large enough to interest Blyth and Co. to undertake the first public offering of our stock, which in turn opened up new sources of funds, enabling us to accelerate our growth and expansion internally and by acquisition. This we have pursued, and now our revenues are at the rate of \$200 million annually.

END



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That Milwaukee Slogan Stems From Chicago's Fire



By
Robert A. Uihlein Jr.
*President and Board Chairman
Jos. Schlitz Brewing Co.*

Milwaukee is one of the world's few cities with its name as part of an advertising slogan for something other than itself. The advertised product is billed as spreading the fame of Wisconsin's largest city, and there appears to be more than a little justification for this rather bold claim.

The slogan is, of course, "The beer that made Milwaukee famous." It accomplishes what Madison Avenue practitioners of the advertising art earnestly hope for when they crank out their catchy phrases and jaunty jingles—product identification is immediate. It seems safe to surmise that, upon hearing these six words, most people know the product referred to is Schlitz beer.

The durability of this world-famous slogan is indeed remarkable. It first appeared in an ad for Schlitz beer on May 15, 1894. It was subsequently trademarked and has been used continuously since that time. As a result, this unusually successful phrase, coined in an era when advertising was not the sophisticated phenomenon it is today, has had considerable time to work its magic.

There have been other advertising

slogans over the years for Schlitz beer, and some of them have achieved a degree of recognition. Among these was one describing the taste of the brew—"Just the kiss of the hops." Another, currently popular, calls attention to the height of despair—"When you're out of Schlitz, you're out of beer." However, only one advertising slogan is prominently displayed on every bottle and can of Schlitz, and that's the one first used 75 years ago. It is as much of a fixture as the familiar Schlitz rhomboid.

The emergence of the slogan is traced back, strangely enough, to the great Chicago fire of 1871. For after that fire, Chicago was desperately short of water (not to mention beer—Chicago breweries were virtually destroyed and those still operating were, of course, lacking water). A small brewery to the north, then known as the August Krug Brewing Co. and in its twenty-second year of operation, sent a ship loaded with beer down Lake Michigan to its parched southern neighbors.

Chicago's thirsty citizens welcomed the Milwaukee beer and, long after the fire cooled and the water supply

was restored, they remembered that wonderful brew from Wisconsin. They wondered how they could go about getting more. And Joseph Schlitz, who was head of the Krug brewery and gave it his name in 1874, saw to it that Chicago was kept well supplied.

In 1870, the year before the fire, Krug sales had risen to 8,700 barrels. After the Chicago conflagration, the Milwaukee firm became a "shipping brewer." By 1880, annual sales had jumped to nearly 200,000 barrels.

Schlitz had literally made Milwaukee beer famous outside the city limits of Milwaukee. The beer's fame grew, and with it the fame of Milwaukee, which was eventually to be known as the "beer capital of the world."

About 20 years after the fire, Baron Alfred von Kotzhausen, president of the Milwaukee Fine Arts Co., a lithograph firm which made Schlitz labels, and Ernest Bielefeld, a Schlitz employee, approached August Uihlein, head of the brewing firm (Mr. Schlitz died in a maritime accident in 1875), about capitalizing on the firm's Chicago gesture and resulting success.



In need of strong leadership at a crucial point, Smith-Corona turned to Edward H. Litchfield, a 40-year-old dean of a business school. He proceeded to fight off a take-over attempt and move the company into a dynamic growth era. A 1968 plane crash cut short his career.

With it came two seats on the Board, which he and his counsel occupied.

At this time I was executive vice president of Kleinschmidt. We had been talking on and off with Smith-Corona about a merger for over a year before Mr. Riklis arrived on the scene. In fact, he made no bones about the fact that the proposed association with Kleinschmidt was one of the things that made Smith-

Corona a prime take-over candidate. It was a company about to be heard from, he felt. In retrospect, Meshulem Riklis can take part of the credit for stirring the Smith-Corona Board into moving more promptly than it otherwise might have.

Smith family influence was still by far the dominant influence in Smith-Corona affairs. Hurlbert W. Smith, youngest of the four Smith brothers, had died in office (at 86) and Elwyn Smith had taken over as president in 1951. Practically the entire Board was more or less close to the Smith family. Needless to say, the Board was not inclined to embark on anything as radical as a merger with anything other than another typewriter company. And that course of action was rather effectively foreclosed by the 1950 Amendment to Section 7 of the Clayton Act.

Then it became apparent that Meshulem Riklis had quietly increased his ownership control to fully 40 per cent of the outstanding common stock.

The Board quickly concluded that none of its numbers had sufficient mastery of the legal and technical aspects of take-over attempts and the necessary leadership qualities needed at this point in the company's history. These qualities were focused, however, in the dean of the Graduate School of Business and Public Administration at nearby Cornell University, Edward H. Litchfield. Dr. Litchfield, just 40, was vigorously proposed for election to the Board.

He proceeded to lead the fight to repel what the Board unanimously concluded to be a raid. The battleground turned out to be the proposed acquisition of Kleinschmidt.

Ed Litchfield was quick to understand the potential benefits of Smith-Corona joining forces with Kleinschmidt. Manufacturing methods for teleprinters were similar to those for typewriters, but Kleinschmidt had made considerably more progress in automating production techniques. And, of course, the tie-in of Kleinschmidt's data handling ability with Smith-Corona's strong position in the office equipment market made the acquisition a natural.

The question was: Should the acquisition be made for cash or stock? It was clear that Smith-Corona's capital structure would most benefit from a stock transaction.

But from the standpoint of the

Riklis group, issuing a large block of stock to a new group friendly to management would have the effect of diluting their interest in Smith-Corona by 10 per cent.

Mr. Riklis sued for an injunction against Smith-Corona's management acquiring Kleinschmidt for stock without first calling a special shareholder meeting to consider the method of acquisition.

He lost—in part because everyone agreed the merger was desirable from the standpoint of the shareholders—and by August, 1956, the merger was completed.

At this point, Mr. Riklis sold his shares (at what people like to call a tidy profit) and to my knowledge has taken no further interest in the company.

That should have been the end of the story. But when the dust had settled, Smith-Corona was a different company. It had begun to make basic changes in management philosophy.

The Board installed Dr. Litchfield as chairman in 1956, partly in recognition of his leading role in the take-over battle. Within a comparatively short time, partly as a reflection of the advanced age of the Board members, but partly, too, as a reflection of Dr. Litchfield's objectives for SCM, practically the entire Board had been reconstituted.

Ed Litchfield was instrumental in setting what was a relatively small and vulnerable company on the course that eventually brought it to the forefront of American industry. His inspiring career in education and foreign affairs, as well as in the business world was cut cruelly short when he perished, with almost his entire family, in a private airplane crash in March, 1968.

His was a career of many significant accomplishments, but I know none was more gratifying to him than the battle to retain Smith-Corona's identity in 1956.

Mr. Riklis profited from the experience as well as from the purchase and sale of the stock. Asked by his biographer if he had learned anything new from his attempt to take over Smith-Corona, he replied, "I learned that a controlling interest in a company must be affirmed by a majority representation on its board of directors."

To which I, as chairman and president of SCM, can only add a fervent: Amen. END

Try an Ice Box on Wheels —and Change an Industry



By
Edward F. Swift
*Executive Vice President
Non-Foods Group
Swift & Co.*

Swift & Co. has for more than a century been part of the dynamic growth of our nation, developing in an era of dramatic business and sociological change.

Historically a meat and food processor, the company became a part of the American scene during a time of constant and drastic innovations in selling and servicing.

Those were years of vital decisions and driving determination on the part of business leaders—men who had the ability and imagination which the times required.

And it was this pattern of determination and decision that formed the foundation of Swift as a major factor in world-wide industry.

The time was in the 1870's. Gustavus F. Swift, who started in the livestock-meat business in Massachusetts, watched as cattle markets moved westward.

To him, the course was clear. He also moved westward, basing his headquarters in Chicago. The year 1875 found him among the cattle buyers in that city.

Events moved rapidly toward decisions that were to be the basis for vast changes in business procedures and practices of the nation.

The demand for meat in populous areas in the eastern United States had grown far beyond the regional supply. This was one of the prime circumstances that led G. F. Swift from the field of cattle buying to the meat business.

A conviction grew that the meat industry could be transformed from traditional curing and packing functions to supplying fresh meat over a wide geographical area.

In the background was an invention which was the key to the far-reaching program—the refrigerator car.

This was the development of more than one of the men of vision of the era, and several patents existed. The concept had not been successfully tried and proven.

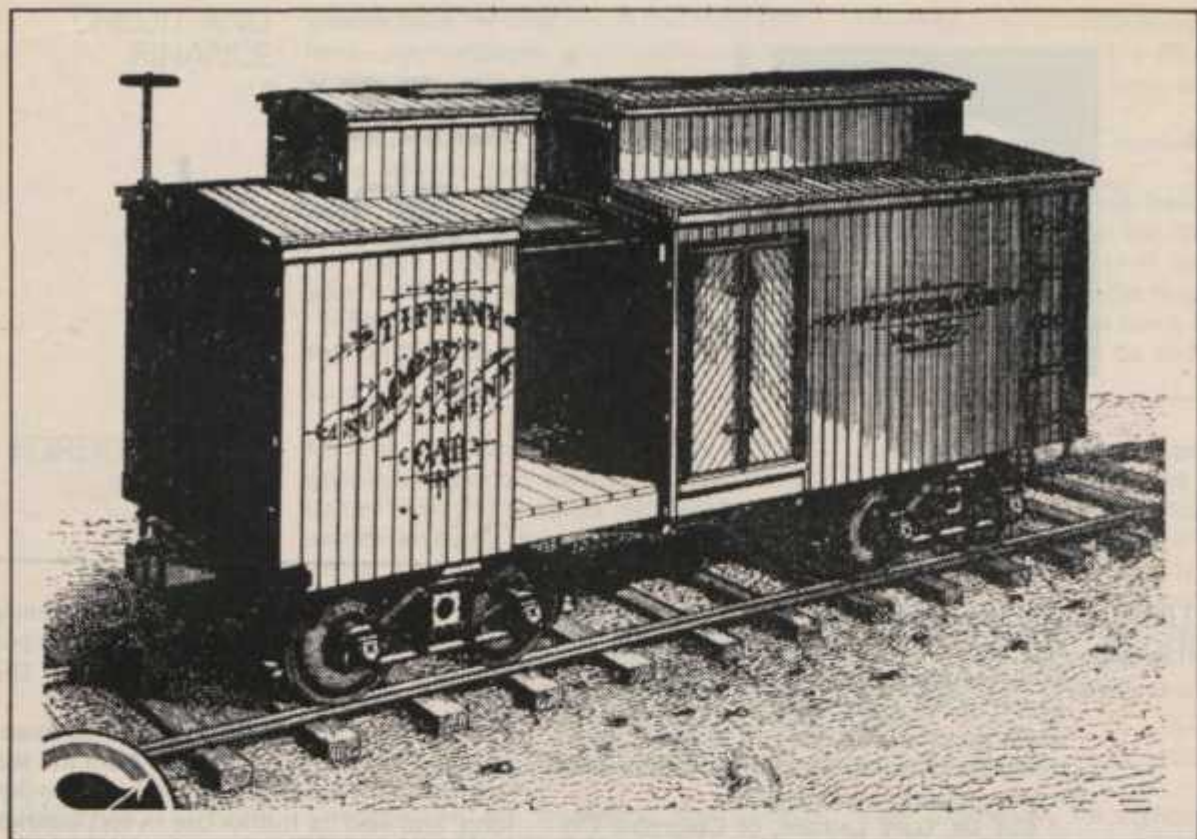
There were grave doubts about the value of the cars, and serious questions about whether they could be utilized successfully.

But the vast potential began to be realized when Mr. Swift decided on independent action.

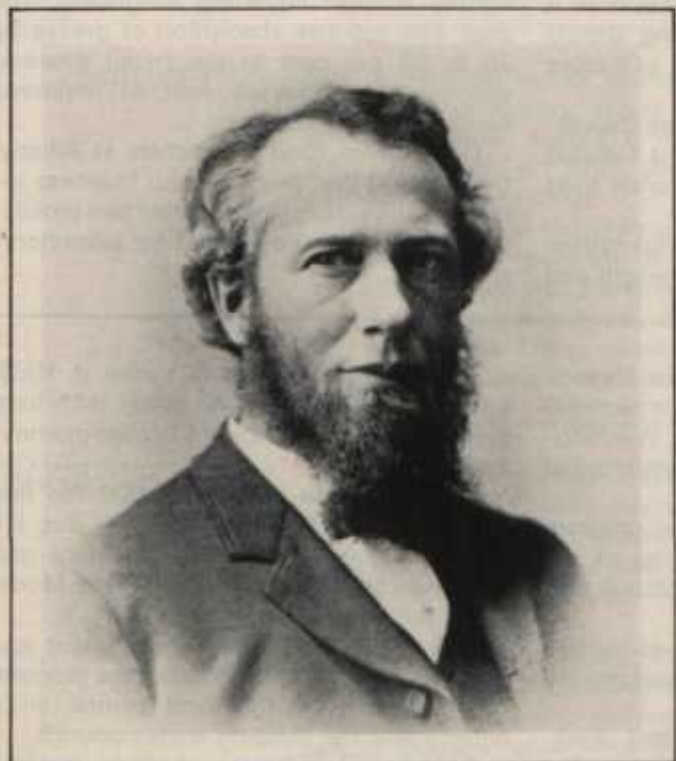
He arranged for a few refrigerated cars to be built—incorporating the best available features—and started shipping dressed meats, with one railroad cooperating.

An economic, industrial and social battle was on, and the opposition was formidable. Railroads feared a loss of revenue in handling fresh meat instead of cattle. Eastern stockyards and local butchers saw a threat to business.

In the new markets, there was the built-in prejudice against anything new or different. The tempo of the times and the growing need for sweeping changes in food distribution supplemented the determination of the industrial pioneers. The decision to ship chilled beef to eastern markets from Chicago, the determination that the refrigerated car would work and the persistence in opening doors to new markets were the factors that led to new concepts in marketing and distribution. The business grew and



Gustavus F. Swift was quick to see the possibilities in refrigerator cars such as the "Tiffany" (named for its inventor), which was patented in 1872. He made good use of them.



This is Mr. Swift 10 years after he moved with the times, shifting his meat business from Massachusetts to Chicago.

spread. Branch houses were established in all major cities.

By 1880, a successful enterprise existed, built by Mr. Swift and other men of tremendous business stature and know-how. Against tremendous odds, prejudices and objections, a far-reaching system had been established as solid business facts were hammered home. These were savings in distribution costs, availability of improved product and dollars-and-cents benefits to consumers and livestock producers.

From the basic meat business, Swift & Co. progressed and expanded in many fields, moving ahead in new directions, adding, changing, realigning and restructuring. It has evolved into a diverse, flexible organization, with autonomous divisional companies supplying products ranging from food to jet fuel.

Swift has moved with the nation and with the times. But determination and daring decisions in another era provide a backdrop and a tradition for its business enterprises and operations. **END**



business: a look ahead

NATURAL RESOURCES

Instrumentation used for lunar exploration by Apollo 12 and succeeding missions is likely to have spillover application in investigation of the earth. Much spin-off from the space program has been in terms of miniaturization of equipment and development of new processes and materials.

But Dr. Gary Latham, of Columbia University's Lamont Geological Observatory, says that moon exploration is bringing the state-of-the-art in use of unmanned sensing, analyzing and transmitting equipment to levels suitable for earth probes.

Dr. Latham was in Washington recently to discuss the instrumentation packages put together by Bendix Aerospace Systems Division for Apollo 12.

He noted that one remote instrument package is now gathering data from the sea bed off San Francisco via a cable 80 miles long, and said its further use in test borings is likely.

At the "talking stage" is an idea for a world-wide network of sensing devices with capabilities ranging from aiding exploration to detection of bomb blasts and earthquakes.

AGRICULTURE

Application of something like sunburn in a major segment of food processing should make for good economics as well as a more attractive product.

That's the estimate of Agriculture Department people reporting the use of infrared radiation in the preparation of french fried potatoes.

Brief exposure of raw potato strips causes a thin shell to form, improving strength and

rigidity without imparting toughness. The shell also reduces absorption of grease by 20 to 25 per cent in the frying process, yielding economies as well as improved flavor.

Government food researchers at Albany, Calif., report that there is keen business interest in the process, and at least two processors have set up equipment for laboratory-scale tests.

CONSTRUCTION

Working-level types at the Labor Department are proclaiming success for a pioneering program—originating with a Washington, D. C., group—to train the disadvantaged in the construction trades.

If applied in other areas, the program could help head off racial troubles of the type plaguing the industry in Pittsburgh and elsewhere.

It also could lead to a top-to-bottom reexamination of the skills and background needed in the building trades.

The Washington program is called "Project Build." It seeks to combine remedial reading and arithmetic improvement with job-related training so as to prepare the disadvantaged for qualifications as apprentices.

It graduated 160 in two cycles in 1968, and 140 in 1969 plus 40 others with long construction experience but lacking journeyman skills.

Cost has been high—\$420,000 the first year and \$640,000 the second. But it's proved successful as an experiment and may gain operating status under the Model Cities program in some areas.

There's some business, government and school system involvement, but the program is largely run by the local central labor council and the building trades council.

A Labor Department observer remarks that the primary union involvement helps overcome organized labor's resistance to outside efforts to open up the trades.

CREDIT AND FINANCE

Greater bank involvement in inner city problems—via mortgages, employment and training, and minority business lending—should get a boost from a new project of the American Bankers Association.

To be sure, banks have been becoming involved, and several new or expanded efforts are in the works. But one crucial lack has been availability of information on what's effective and how it's done.

The ABA's urban affairs committee is striving to build staff capability to become a

clearinghouse of information on the subject. Peter F. McNeish of the ABA staff says the effort stems partly from statements from bankers such as:

"We'd like to get involved, but how do we do it?"

The ABA group has been analyzing returns from a survey of the 300 largest banks to determine the level of specific focus on urban problems. Results ranged from failure to reply at all, on one hand, to great masses of data on what can be and is being done.

FOREIGN TRADE

Meat ax attempts to curb growth of U. S. conglomerates can weaken American companies' ability to compete with foreign businesses enjoying support of their governments.

That's the implication of an argument of H. S. Geneen, president and chairman of International Telephone and Telegraph, in defense of the diversified corporation.

Mr. Geneen, whose company's overseas

business accounts for 40 per cent of its \$4 billion sales a year, notes that American know-how is no longer unique, but is widely shared elsewhere, and the same goes for massive productive capacity.

"We can win... [the] competitive struggle tomorrow as we did yesterday, but we must not be hampered with artificial strictures against diversification or size," he says.

MANUFACTURING

Congressmen are pressuring the Defense Department to restrict use of government-owned machine tools by prime defense contractors for commercial work.

Some 74,000 government-owned tools are located at facilities of government contractors, but are not in full-time operation on government work.

Contractors have been allowed to use

them extensively for commercial purposes, and have been charged by the government for such use.

Small businesses have argued that though the prime contractors have not been getting a free ride, the mere availability of the government-owned equipment gives them a competitive edge in seeking both government and nongovernment work.

MARKETING

Self-deprecating humor in marketing, pioneered in this country, seems to be taking hold world-wide, according to Richard O. Baily, president of Sales and Marketing Executives-International.

He concludes on the basis of a two-week seminar in this country with Japanese marketing experts that marketers who don't take themselves too seriously chuckle all the way to the bank. Other conclusions:

- Global marketing is becoming more of a

must than a matter of choice because of competition and sales opportunities.

- Traditional ways of doing things can and should be scrapped as no more valid than the most recent success. Ditto the textbook rules whereby small companies are considered unable to tilt with the giants.

- Major skill needed in marketing over the next five years is ability to master and communicate the results of technological change.

TRANSPORTATION

Regional air carriers hope to capture a growing share of domestic passenger traffic, which is expected to increase by 10 to 12 per cent a year over the next decade. That means 177 billion passenger miles by 1975, 300 billion by 1980.

Regional carriers account for less than 7 per cent of total domestic volume, and that share has been slow to increase. Pessimists talk of mergers, take-overs, and needs for greatly increased subsidy.

But Edwin I. Colodny, Allegheny Airlines executive vice president for legal affairs and

marketing services, says the regionals' goal should be 10 per cent of domestic traffic by 1975, with greatly expanded length for their average passenger trip.

This would require greater access to dense markets and elimination of some low traffic generators (which might be served by air taxis and the like). Under current federal policy, some regional carriers have increased access to important markets, and the advent of new twin jets has improved their ability to meet the needs of intermediate-sized cities.

leader- ship is the

"Faced with an urban crisis, the first instinct," President Nixon points out, "is to demand vast new government programs and expenditures. Yet even at best," he adds, "these government programs would only scratch the surface."

What, then, is the answer?

The real answer to economic and social problems is *leadership*—business and professional leadership.

The answer lies in knowing the root causes of the problems in your city, and accepting leadership responsibility for helping remove the causes.

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You will enjoy the fellowship of this leadership meeting, you will feel the surge and spirit of excitement that is somehow a part of this important group of men and women who have the ability to get things done through voluntary organized action.

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1. You will benefit by hearing at firsthand from topmost leaders in industry and government what they see ahead for America—what is being planned and proposed, politically and otherwise. This alone is worth the trip to Washington.

2. You will benefit by having the oppor-

answer

tunity to talk informally with your Congressmen while you are here, and letting them know your views on national issues.

3. You will benefit by getting information and ideas you can use in your own work and in your organization back home.

4. The organized business movement will benefit by having your partnership in making its leadership and action plans for the '70's.

FOR MORE INFORMATION

Use the coupon for more information about the National Chamber's Annual Meeting in Washington, April 26-28. Or check with your local or state chamber of commerce, or trade or professional association.

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EDITORIAL | SNAKE OIL

The Federal Trade Commission has decreed that reclaimed oil must be clearly labeled on the can—and on the front, not the back. The rules are very specific.

Unfortunately, FTC is not always so precise. In the case of a staff study of conglomerates, for example, the impression was created that it was a formal commission report.

Other commissions and agencies do the same thing.

It would be wise to read the label carefully before swallowing any of the snake oil that some government guys are peddling.



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